INDUSTRIAL EQUIPMENT NEWS

APRIL - 1950
VOL. 15 • NO. 4

INDUSTRY'S MOST COMPLETE PRODUCT INFORMATION SERVICE

The Original IEN

What's New IN EQUIPMENT, PARTS, MATERIALS

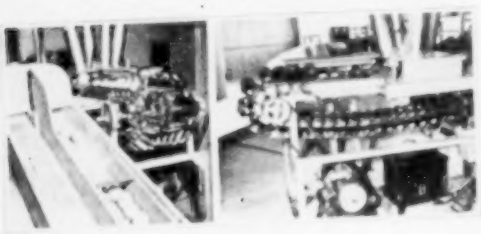
AFFILIATED WITH THOMAS REGISTER OF AMERICAN MANUFACTURERS

Product Information for specifiers and buyers in all industries

IEN-3086

SORTING . . Electronic equipment grades oranges for their juice content

Source: AUTOMATIC X-RAY CORP.
5140 W. Jefferson Blvd., Los Angeles 16, Calif.



A row of oranges is passed through the new Automatic X-Ray machine. The fruit is inspected and sorted into three classes. One is a full grade with full juice content. The next is a grade with a fair amount of juice. The third is the rejected class, due to little content. The machine operates continuously and has twice present type belts each handling and sorting 30 per minute per hour to a size range between X-12 and X-12 inches. Each piece is weighed and sorted in accordance with the Food and Drug Administration's Grades for Citrus Fruit Juices Exchange.

Operation is based on the fact that X-ray transmitted through an object is weighed by the image intensifier. This form of equipment is a pair of X-ray sensitive cells at each side. Transmitted X-ray passes through the fruit, the X-ray beam diminishes in strength in proportion to the amount of juice present. The other machine is similar, but is a fixed X-ray capacity. The two outputs are compared and the difference is measured by the change in the compared. The compared output from the bridge actuates a discriminator circuit. The "on" mechanism, as the expected average, sets the size and time the conveyor when it receives the others the signal, or rejection signal.

The equipment is representative of what the industry is prepared to handle in design and manufacture. It is mechanical, automatic and semi-automatic and designed for inspection of a product to determine natural characteristics.

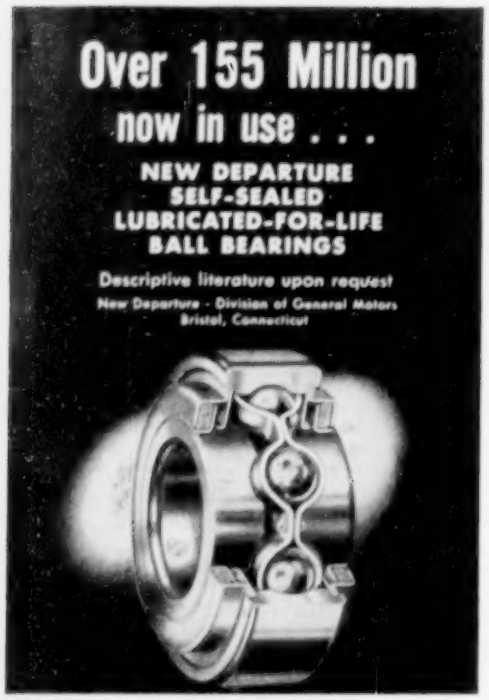
IEN-3087

CALCULATING . . Quality indicator signals reject rate in production line

Source: GENERAL ELECTRIC CO.
Dept. GX-201, Schenectady 5, N. Y.

Quality Control [illegible] is a new accessory of [illegible] to make the passing objects in a production line an indicator to signal out of order a predetermined rate of rejection. [illegible] is performed by two sets of [illegible] production, and is performed with which [illegible] in the management of [illegible] and [illegible] of [illegible] or [illegible] the [illegible] of [illegible] the [illegible] of [illegible] the [illegible] of

RAPIFIT—Identify by IEN-3090 if you write the maker



RAPIFIT—Identify by IEN-3091 if you write the maker

FREE! 32-PAGE HANDBOOK

SHOWS HOW TO STOP CONDENSATION DRIP

No Drip

Stops Drip from
- ✓ Cold water pipes
- ✓ Water filter tanks
- ✓ Metal or concrete ceilings
- ✓ Basement walls
- ✓ Condensers
- ✓ Air Ducts
- ✓ Blower pipes
- ✓ Dust Collectors
- ✓ Crystallizers

Learn how you can control condensation drip from pipes, tanks, ceilings—from metal, wood or masonry surfaces.

LOW COST — EASY TO APPLY

Anyone can apply NoDrip, the heavy duty insulation type coating. Brush it on in spots if you like or on pipes or equipment where temperature differences cause condensation. Save money by preventing rust and corrosion. Deaden sound, decrease vibration on metal ducts or pipes.

HANDBOOK SHOWS HOW

Send today for your copy of the NoDrip HANDBOOK which tells what this plastic cork material can do for you. It's the modern solution to condensation drip problems.

Send for Your Free Handbook Now!

J. W. MORTELL CO.
Dept. 1E, Kankakee, Ill.

RAPIFIT—Identify by IEN-3092 if you write the maker

Rigidized Metals®

Add Utility and Sales Appeal in 13 Ways!

There are 13 new performance characteristics in design strength, ribbed and textured Rigidized Metals for extra utility, added sales appeal and to make less metal do more work. If you use flat rolled metals for any purpose, you can use Rigidized Metals more profitably. Investigate! Write today!

SEND OUT CATALOG 13 SWEET'S FILE

U.S. & Foreign Patents

Rigidized Metals Corporation
Buffalo N. Y.

RAPIFIT—Identify by IEN-3093 if you write the maker

NIBBLING . . Reciprocating machine, 30 in. throat for soft steel to 1/2 in.

Source: ANDREW C. CAMPBELL DIV.
927-31 Connecticut Ave., Bridgeport 2, Conn.

Model 330 is a heavy duty machine with three tools that can be set for cutting angles in standard shapes plates or shapes of soft steel measuring up to 30 in. throat or maximum plate 1/2 in. thick. There is a 3 hp. motor for a 3 hp. flywheel mounted belt-connected motor for speeds of 350 and 700 strokes per minute. Change is made by changing belt position on the V-belt sheaves. The upper reciprocating head takes a round pointed punch (1) to pierce to a complete outline on the work surface.

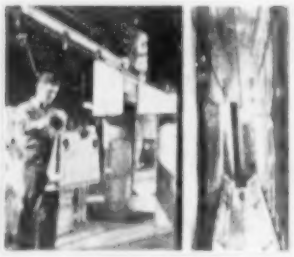
The punch enters a round die mounted in a holder on the frame table. Slugs from the nibbling operation drop through a pipe at the floor. The round die and punch permit moving the work in any direction as dictated by the template outline. Two support bars hold the work sheet level as nibbling proceeds.

Equipment includes a dozen sets of five sizes of punch from 1/8 to 1/2 in. corresponding sizes of die, three for the smallest punch and one for the largest, two die holders, wrenches, punch cutter and punch and remover change. Operating instructions accompany each machine. Footprint dimensions are 31 by 64 by 65 inches.

RAPIFIT—Identify by IEN-3094 if you write the maker

CLEANING . . Infra-red oven vaporizes oil from sheet metal work

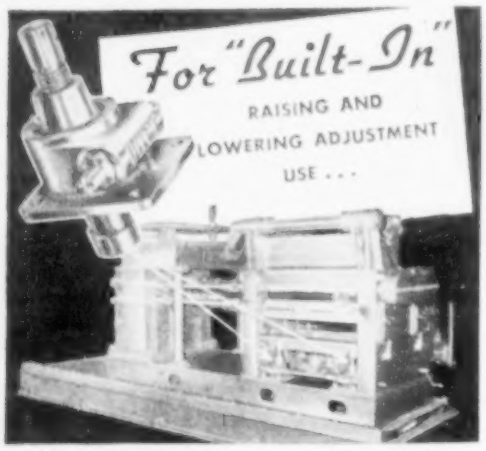
Source: EDWIN L. WIEGAND CO.
7505 Thomas Blvd., Pittsburgh 8, Pa.



New assembly of the company's Chromalox radiant heat oven, recently described (U.S. MED. 48, pressure of two bundles of cotton cloth or of mounted cloth, each weighing one additional kilogram, is carried by horizontal positions for two operators at Kidde arrow. The equipment was employed for a manufacturer of shoes metal work, who manufactures its own lateral forming tools, at the Kidde, and provided an overhead conveyor for work handling.

Work is loaded on the conveyor at the operator's end and enters the Kidde at a point low on the machine. The gas on the metal as much power cannot run dry. Pressure runs up to 50 psi. A total of 100 work pieces containing 20 to 21 oz. are loaded at the loader. The cycle is 3 to 4 min. when 12 to 20 pieces are processed in the oven and 6 minutes.

RAPIFIT—Identify by IEN-3095 if you write the maker



DUFF-NORTON Worm Gear Jacks

For suggested applications write for Bulletin AD-5 G.

THE DUFF-NORTON MANUFACTURING CO.
MAIN PLANT and GENERAL OFFICES, PITTSBURGH 30, PA.
CANADIAN PLANT, TORONTO 1, ONT.
"The House that Jacks Built"

RAPIFIT—Identify by IEN-3096 if you write the maker

Atlas 7" SHAPER

ATLAS PRESS CO.

RAPIFIT—Identify by IEN-3097 if you write the maker

Smash small fires before they can grow!

Knock small blazes out with the 5 pounds of CO_2 in a Kidde Model 5. Easy, simple trigger-finger control! Write for free literature.

Kidde

Walter Kidde & Co., Inc., 436 Main St., Belleville 9, N. J.

RAPIFIT—Identify by IEN-3098 if you write the maker

NOW—ON SALE AT HANDY & HARMAN DEALERS—EVERYWHERE

in handy 5-ounce packets

Now you can get this versatile, fast-acting low-temperature silver brazing alloy in convenient, handy 5-oz. square packets. Just the thing for small shops—plumbers, refrigeration, electrical and other service, maintenance and repair crews, etc. Also for all shops that make ferrous and non-ferrous metal products for silver alloy brazing trial work, and repairs, etc. Each package contains a 5-ounce coil of 1/16" EASY-FLO 45 wire (approx. 140 linear inches), also torch brazing instructions and a "Quick Facts" folder giving full details about EASY-FLO 45.

WRITE TODAY FOR OUR LIST OF DEALERS

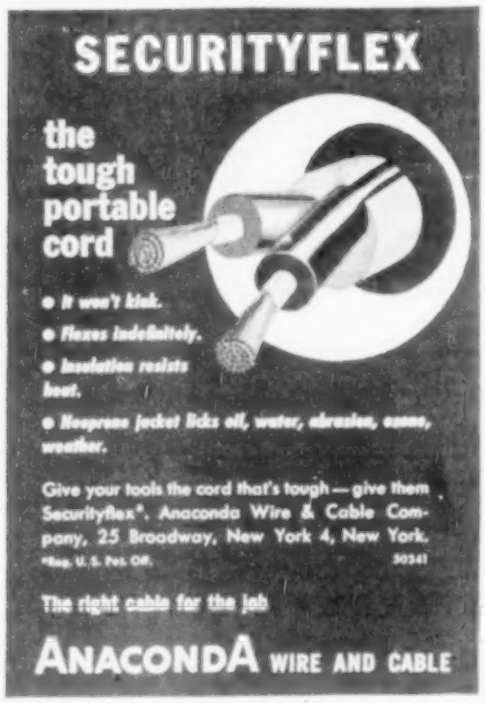
and order a supply of packets from the nearest one.

HANDY & HARMAN 82 Fulton St., New York 7, N. Y.

IEN-3099

THE INTERNATIONAL NICKEL COMPANY, INC.
73 Wall Street, New York 5, N. Y.

IEN-3100



IEN-3101

BROWNING GRIPBELTS

—matched and sealed for your protection

Each belt is placed in a testing machine which reads distance between sheave centers under a given tension. Belts with identical characteristics are assembled in matched sets, then sealed. Installation instructions accompany each set.

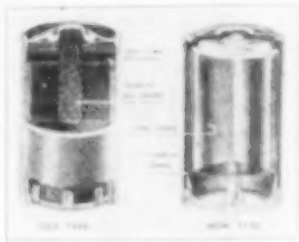
Nationwide service — write for the name of the BROWNING Gripbelt distributor near you.

BROWNING MANUFACTURING CO.
16 Chester Street Maysville, Kentucky

IEN-3102

BATTERY . . Carbon enclosed cell for flashlights, will not perforate

Source: NATIONAL CARBON DIV.
30 E. 42nd St., Rm. 305, New York 17, N. Y.



Reversed design — [illegible]

The carbon [illegible]

IEN-3103

NAME PLATES . . Made of Monel Metal in relief or reverse etched designs

Source: ANDERSON & SONS
N. Elm St., corner Notre Dame, Westfield, Mass.

Corrosion proof and stain proof

Delivery [illegible]

IEN-3104

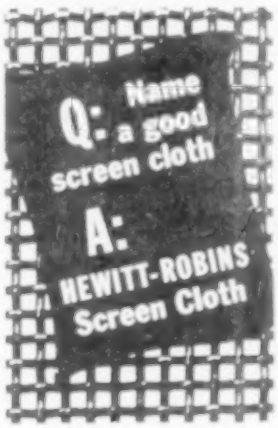
SEALING . . Piston ring in three-part expanding design

Source: AUTO-DIESEL PISTON RING CO.
3225 Superior Ave., Cleveland 14, Ohio

An inner spring [illegible]

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER — Descriptions . . Ratings — See Page 38

IEN-3105



BECAUSE [illegible]

BECAUSE [illegible]

BECAUSE [illegible]

BECAUSE [illegible]

SEND TODAY [illegible]

HEWITT-ROBINS
SCREEN CLOTH

IEN-3106

LUBRICATION ECONOMY

LUBRIPLATE LUBRICANT

Saves Gears and Transmissions

[illegible]

LUBRIPLATE DIVISION

The Different LUBRICANT!

IEN-3107

REPAIR WORN-OUT FLOORS OVER A WEEK-END

NO PLANT TIE-UP — AND BETTER HEAVY-DUTY CONCRETE

[illegible]

*Reg. U. S. Pat. Off.

LONE STAR CEMENT CORPORATION
Offices: Albany • Bethlehem, Pa. • Birmingham • Boston • Chicago • Dallas, Houston • Indianapolis • Jackson, Miss. • Kansas City, Mo. • New Orleans, New York • Norfolk • Philadelphia • St. Louis • Washington, D. C.

IEN-3108

Direct-to-you shipment of Bronze Bar Stock

Cuts Bearing Costs!

Stocks of N.B.M. "Tiger" Bronze now located for fast delivery . . . the bar size you want when you want it.

More and more plant engineers — with an eye on bearing costs — are going King to longer-wearing, non-brittle, non-to-machine "Tiger" Bronze. It's the one alloy that has every important point for bearings. Assure your bearing service for the complete facts on this money-saving material.

FREE BULLETIN [illegible]

Write Today For Information and Prices!

American Brake Shoe Company
NATIONAL BEARING DIVISION
[illegible] • St. Louis 11, Mo.

IEN-3109

MOLYBDENUM High Speed Steels

You should know these FACTS!

At least one type of Molybdenum high speed steel is listed and promoted, on a basis of equivalent and interchangeable performance with tungsten high speed steel, by makers of high speed steel.

Users' reports of Molybdenum high speed tools everywhere indicate that performance at least equals and in many cases betters that of tungsten tools.

Molybdenum high speed steels can save money in production — for proof, send for a copy of our FREE and informative booklet.

This book sent to you FREE

Climax Molybdenum Company
50 C Fifth Avenue, New York City

INDUSTRIAL EQUIPMENT NEWS

EEA JEN EEA

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461 Eighth Avenue, New York 1, N. Y.

What's New · EQUIPMENT · PARTS · MATERIALS

Vol. 18 APRIL, 1950 No. 4

Good Advertising

A manufacturer designs a new industrial product. It contains some novel points of design. Application possibilities are imaginative. It differs from other products previously developed.

The manufacturer calls together his engineers and production men and distribution experts. They study the product and talk it over. They come out with a fair understanding of what it is and how it works and what it will do, of its material, making, wear, price. The advertising manager is directed to prepare copy.

You see this advertising and you like the simple interesting straightforward presentation of basic useful information. Perhaps you contact the manufacturer seeking to purchase. Perhaps you clip the advertisement for future reference.

The copy runs for several months. Others see it also and act upon it. The manufacturer's accounts are busy. He does good business. His organization, behind the scenes, works out improvements based on field experience, simplifies and expedites production, collects and circulates information that may be useful.

But now certain manufacturers of other products have felt the impact of the new one. Others also have seen it and are seeking a qualitative edge for competitive competition against the leader.

You, in your changes in your advertising to those manufacturers, if, at this point, you happen to be stopped by one of many "stoppers" seem to advertising more. You may not recognize the stopper but you will be familiar with the prospective "selling chatter". You may wonder what the competitive selling will do about it.

You notice the advertising with more energy. There is some new information on a manual for the product. It is in field installation. It shows photos, specifications, layouts, all the things you need to know in your own working problems. You ask for a copy. Copy is received.

You see you have the product. You see no further need for the new product. You decide to do the work you need and look at the advertising. Some how, on the basis, somewhere, that that is not so.

You will make a point to look for it and find it. If it is, you are established in your confidence on that particular subject. You know that you will find it if you need information of your material and it shows the best application and what does it actually perform.

You know he is working for you and you expect to be advised. Therefore you must look to business to be your advisor.

You like the way that the advertising has shown the product for which you are in the advertising selection. It is the exciting characteristics of the product, work for engineers, production men, and distribution experts of working to your business. Perhaps you will find the number of things in the things which, in a way, you have to work out in your business. Perhaps you find the way of the things which, in a way, you have to work out in your business. Perhaps you find the way of the things which, in a way, you have to work out in your business.

W. E. Lish.

IEN-3110

Poro-Stone Filtration FOR COMPRESSED AIR

EFFICIENTLY REMOVES
OIL, WATER
PIPE SCALE

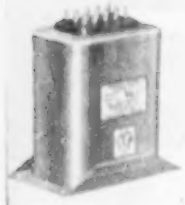
The Adams Poro-Stone Filter gives continuous service without attention or maintenance expense. Efficient centrifugal separation plus diffusion through Poro-Stone removes contamination completely without pressure loss. Automatic Trap eliminates attention and assures continuous and efficient filter operation. Write for complete data—Bulletin 101.

R. P. ADAMS CO., INC.
219 E. Park Dr., Buffalo 17, N. Y.

ADAMS *Poro-Stone* AIR FILTER

IEN-3111

REDUCE CONTROL COSTS TO A FRACTION



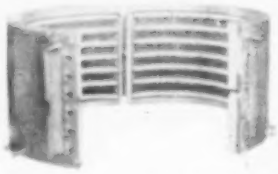
with the VICKERS Standard MAGNETIC AMPLIFIER

VICKERS ELECTRIC DIVISION

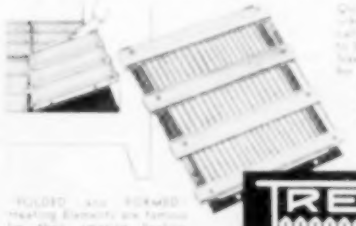
IEN-3112

Use "FOLDED-and-FORMED" HEATING ELEMENTS *Two Ways*

CUSTOM-BUILT JACKETS...



STANDARD RACKS for Spot Heating in Your Equipment



TREN INC.
Electrically Heated Industrial Equipment
247 LEVERINGTON AVE., PHILA. 27, PA.

IEN-3113

YOU CAN PROFIT *by looking into*

SEALMASTER BALL BEARING UNITS

Have your SealMaster engineer to give your company the inside story of SealMaster bearings. Let him show you the cut-away SealMaster he carries and tell you how they can serve you better in your plant and on your products for 3 reasons.

1 PERMANENTLY SEALED
2 SELF-ALIGNING
3 PRE-LUBRICATED

Write for Catalog 845

SealMaster ball bearings are available in a complete line of standard units.

- Pillow Blocks
- Flange Units
- Hanger Units
- Cartridge Units
- Flange-Cartridge Units
- Take-Up Units

Bearing Division
STEPHEN S-ADAMSON Mfg. Co.
251 Kilgrove Ave., Paterson, N.J. — 1401 Hyde Park Ave., Hollywood, Calif.

Factory Representatives and Dealers in All Principal Cities

IEN-3114

WHEN YOU...

Disconnect, You Stop the Flow in *Both* Ends

Wherever the flow of air, fluids or gases must be interrupted, Wiggins INST-O-MATIC couplings save lost time. Uncouple a Wiggins. You've automatically stopped the flow in both ends. Connecting, or disconnecting, is as simply as switching on a light. Wiggins INST-O-MATIC couplings can increase efficiency in your plant under any operation.

EQUIPMENT MANUFACTURERS

Wiggins QUICK DISCONNECT INST-O-MATIC COUPLINGS

IEN-3115

HOW MUCH DO POWER THROBS COST YOU?

In production loss?
In wear and tear of machinery?
In maintenance?

BIG SAVINGS result from remedying the common source—poor couplings.

LOVEJOY
L-R
Flexible Couplings

Get the complete Lovejoy Catalog and see for yourself!

LOVEJOY FLEXIBLE COUPLING CO.
5014 W. LAKE ST. CHICAGO 44, ILL.

IEN-3116

S-A SWIVELOADER

Loads Bulk Materials Into Box Cars

(1) Faster (2) Easier (3) At Low Cost

Powerful centrifugal thrower unit handles dry materials up to 2" size. One man operates loader without entering car. Eliminates hand trimming!

Write for BULLETIN No. 1046

231 Kidgeway Ave. Aurora, Illinois

STEPHEN S-ADAMSON MFG. CO.
Televel—Bin Level Controls · Car Loaders · SealMaster Ball Bearings · Car Pullers · Winches · Saco Speed Reducers

IEN-3117

TAKES THE POUNDING OF MILLIONS OF FEET!

PABCO MASTIPAVE
AMERICA'S No. 1 LOW COST LONG-LIFE FLOOR COVERING

Here's what the ILLINOIS CENTRAL RAILROAD has to say about PABCO MASTIPAVE

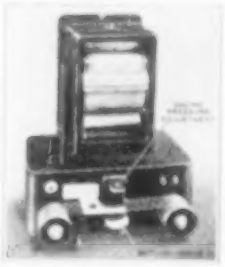
SEND NOW FOR THE FULL STORY OF MASTIPAVE!

THE PARAFFINE COMPANIES, INC.
New York 16 · Chicago 14 · San Francisco 19

IEN-3118

GAGE . . Thickness recorder for plastic sheet materials, papers

Source: PRATT & WHITNEY DIV.
49 Charter Oak Blvd., West Hartford 1, Conn.



IEN-3119

DRIVE . . Hydraulic oil functions in extremes of heat and cold

Source: GULF OIL CORP.
3802 Gulf Bldg., Pittsburgh 30, Pa.

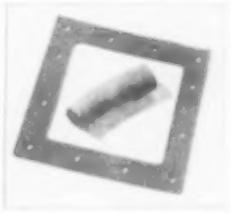
Gulflite 5W

Non-foaming
free-flowing
body-retaining

IEN-3120

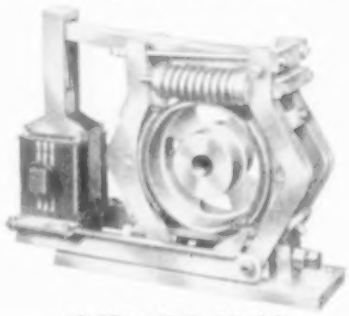
SEALING . . Sponge type silicone in sheets, extruded and molded shapes

Source: CONNECTICUT HARD RUBBER CO.
405-9 East St., New Haven 9, Conn.



IEN-3121

TROMBETTA SOLENOID CO.
331 N. MILWAUKEE ST. • MILWAUKEE 2, WIS.



SB-373 SHOE BRAKE
10" WHEEL, 5" FACE, 450 FT.-LBS.

SB-300 LINE OF BRAKES
TORQUE 3 TO 16500 FT.-LBS.

B-100 LINE OF DISK BRAKES
TORQUE 10 TO 25000 FT.-LBS.

EIGHT LINES OF SOLENOIDS
RECIPROMOTORS AND SEMOTORS

IEN-3122

If You Need Accurate Heat—CHECK

CHROMALOX Electric HEATING UNITS

• FAST! • EASILY CONTROLLED!
• ECONOMICAL! • ALWAYS ON THE JOB!

Ask for Catalog 50

CHROMALOX
ELECTRIC HEAT FOR MODERN INDUSTRY

IEN-3123

. . . . Get Cost-Cutting FACTS about PUNCHES and DIES

BOOTH 665
TOOL ENGINEERS COST-CUTTING INDUSTRIAL EXPOSITION

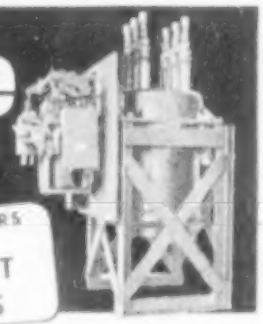
When attending the ASTE show at Philadelphia, Convention Hall, April, be sure to find out the many ways in which interchangeable punches and dies improve punching and money on your punching plant operations. Our engineers will be on hand to help you on your die-making and production problems.

If unable to attend the Show, send for catalog giving full information on Allied's "one stop service" for die makers and die users.

ALLIED PRODUCTS CORPORATION
Department 82 • 12633 Burt Road • Detroit 15, Mich.

IEN-3124

Save
• DOLLARS
• SPACE



ALLIS-CHALMERS TYPE DZ INDOOR OIL CIRCUIT BREAKERS

DZ accessories are interchangeable. Thus they are simple, rugged, trouble-free, with minimum parts, and with one set-up tools for installation. Time-saving, time-proven.

Our resources, Extra security. Our dollars saved, and in actual 10 years, for power users.

Depending on circuits your power system, the DZ breaker can be used to get Reduction in cost and in overcoming space and dimension limitations. DZ breakers are available in 4 DZ breakers.

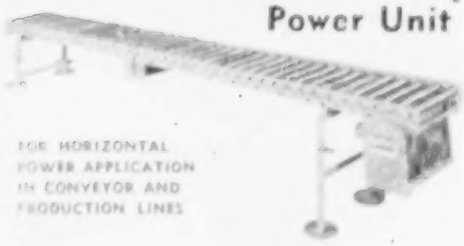
Type	Rated kV	Interrupting Capacity
DZ-406	7.2	100,000 kva
DZ-606	14.4	150,000 kva
DZ-1006	14.4	250,000 kva
DZ-1006	14.4	500,000 kva

ALLIS-CHALMERS, 900A 32nd St. MILWAUKEE, WIS.

ALLIS-CHALMERS

▼ RAFFITY—Identify by IEN-3125 if you write the maker ▼

METZGAR "LIVE-ROLLER" Power Unit



FOR HORIZONTAL POWER APPLICATION IN CONVEYOR AND PRODUCTION LINES

Metzgar "Live Roller" Power Units offer a wear-resisting metal transmission surface that outlasts belt type units many times over for handling hot or sharp edged articles.

They are offered in various lengths and are readily adjustable for height.

Rollers may be specified for any spacing—3 to 5 rollers per foot—either above or below the channel frame.

For economy in power units, wear best has to a Metzgar.

WIDTHS 12, 15, 18, 24

BALL BEARING THROUGHOUT

MORE DURABLE THAN BELT TYPE

PERMANENT OR PORTABLE BASE

For full specifications and price, write for Folder No. 1249

METZGAR

METZGAR CO.
417 Douglas St. N. W.
GRAND RAPIDS 4, MICH.

▼ RAFFITY—Identify by IEN-3126 if you write the maker ▼

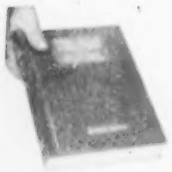
When each trolley wheel carries its share of the load in perfect alignment with the craneway tracks and all possible friction is eliminated, the result is perfectly articulated trolley travel.

Applied to American MonoRail Cranes, these articulated trolleys permit operating speeds of 500 feet per minute . . . constant service . . . handling loads up to 10 tons. And with this is offered all the flexibility of MonoRail design for *interlocking carrier service between and beyond the craneways.*

Write for complete information

THE AMERICAN MONORAIL COMPANY
12011 Athens Avenue • Cleveland 7, Ohio

▼ RAFFITY—Identify by IEN-3127 if you write the maker ▼



A 564-Page Authoritative Handbook

TOOL STEEL SIMPLIFIED

Yours for only $2.00 postpaid

Over 100,000 copies in use

Completely Revised!

Which of its 21 data-packed chapters can you use most profitably?

Part I—Getting Acquainted with Tool Steel

Part II—Selecting the Right Steel

Part III—Properties, Heat Treatment and Testing of Tool Steel

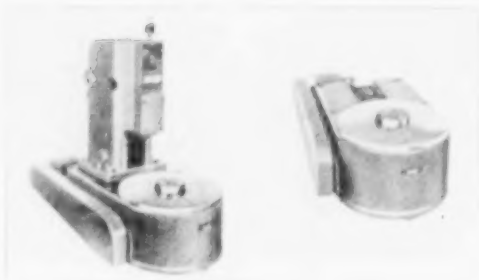
Part IV—Things Worth Knowing

CLIP AND MAIL NOW

▼ RAFFITY—Identify by IEN-3128 if you write the maker ▼

PRESS . . Pneumatic machine, 4 ton, has motor driven index table

Source: PRECISION DETROIT CO.
2124-28 Fairview Ave., Detroit 14, Mich.



New PDC press includes a pneumatic cylinder in combination with a motor driven index table. The table through the cycle, and then. The cylinder is under regulation to 5 ... 1000 lbs. The cylinder operating 6,000 lbs of ram pressure at the bottom of the stroke on brake and pressure from a ... Operation is ... Included in the assembly is a base that carries a 11½-inch plate with a bearing diameter, which mechanically driven by a ½ hp motor. The assembly is fitted with a ... ring and is mounted a pneumatic cylinder for press action in unison with the index movement. The press operation is ... shown in the illustration, with the ... Operation is ... this speed range. These include 10 to 25 indexes and press actions per minute in the low range, 20 to 40 indexes and 20 to 50 in high. Machines speed with 10 hp to press cylinder is 10 psi. Air. The ... separately for other applications as ... Machine capacity are 27 ½ to 30 to 40½ inches. Overall height with the press is 72 ... inches.

▼ RAFFITY—Identify by IEN-3129 if you write the maker ▼

HOSE FITTING . . Strap type clamp, seven sizes for 1 to 2½-in. hose

Source: BLAISDELL MFG. CO.
1404 Alamitos Ave., Long Beach 13, Calif.

Cold rolled strip ... 1 ... 0.062 ... Hardened ... and ... hot rolled ... from a ... (that takes a ... Durable and ... lightening ... The parts are ... Carrier ... Factory ... in boxes holding 25 ... of a size ... in ... holding 8 boxes. The thread ... hole ... 200 ... 20 ... 2 ... complete ... the ... to ... 100 pounds.

(1) Makers of These Hot Air Dryer Products Are Listed in THOMAS' REGISTER. Specifications Ratings ... See Page 50

▼ RAFFITY—Identify by IEN-3130 if you write the maker ▼

TRUSCON SPEED-ERECT

Ready-Made Steel Buildings

● Meet your requirements of space, production, transportation by building or extending your plant with Truscon Speed-ERECT Steel Buildings.

These ready-made buildings are available in standard designs, portable and of various sizes, designed and engineered and are easily adaptable to any place needed. Factors include the protection, convenience, ease and speed of erection, dismantling and transportation, low upkeep, low cost and high investment value. Truscon will cooperate with your construction for the speedy erection of these Air Purpose Truscon Steel Buildings. Write for FREE book.

TRUSCON STEEL COMPANY
YOUNGSTOWN 1, OHIO Subsidiary of Republic Steel Corporation

▼ RAFFITY—Identify by IEN-3131 if you write the maker ▼

CUT CONVEYING COSTS WITH COBURN CONVEYING EQUIPMENT

You can lower costs, speed production and reduce accident hazards with Coburn—the original enclosed overhead monorail. Sectional design permits easy installation, rearrangement or extension, as required. Coburn Enclosed Track does not obstruct floor space, requires very little headroom, simplifies spotting of work directly over machines. Can be used with hand chain or electric hoist. Carries loads up to 3000 lbs.

Write today for catalog on Enclosed Track, Bracket-type Jib Cranes, Travelling Crane and Monorail installations. Engineering help available without obligation.

COBURN PRODUCTS DEPARTMENT
WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORP.
Executive Office • 500 Fifth Avenue, New York 18, N.Y.
Sales Engineering • 56 Sterling Street, Clinton, Mass.

▼ RAFFITY—Identify by IEN-3132 if you write the maker ▼

Get **MORE** JACKING POWER **LONGER** JACK LIFE

Simplex HYDRAULIC JACKS

Dependable performance on difficult jobs produces reports like these from Simplex Hydraulic users. Engineered for faster, safer jacking these jacks include such features as leak-proof high pressure seals of Neoprene; non-sticking ball valves; smooth acting ram of SAE X1112 steel—plus many others. Eight models, capacities from 3 to 100 tons—all safety-tested to 50% over rated capacity.

SEND FOR BULLETIN: HYDRAULIC 49

Simplex LEVER SCREW HYDRAULIC Jacks

TEMPLETON, KENLY & CO.
1010 South Central Avenue
Chicago 44, Illinois

▼ RAFFITY—Identify by IEN-3133 if you write the maker ▼

NO SEAT!

TO SCORE . . . WEAR . . . CLOG . . . AND LEAK

Cross section of Type 30 Bar-Jack Valve Flanged

YARNALL WARING COMPANY
122 Mermaid Ave., Phila. 18, Pa.

YARWAY BLOW-OFF VALVES

IEN - 3134

for wire marking speed*....

*for ECONOMY

PACKED WITH FACTS

E-Z CODE

IEN - 3135

THE CASE OF THE NERVOUS SHIP

Vibrations and noise in her pipe systems eliminated by installation of U. S. Rubber expansion joints

A PRODUCT OF U.S.RUBBER SERVING THROUGH SCIENCE

UNITED STATES RUBBER COMPANY
ROCKEFELLER CENTER, NEW YORK 20, N. Y.

IEN - 3136

Order Yours Today!

The New "SET-RITE" STEEL STAMP HOLDER

For Safe, Clear-Cut Marking

of Round, Square, Flat and Other Shaped Products

Write for Data Sheets SR-1

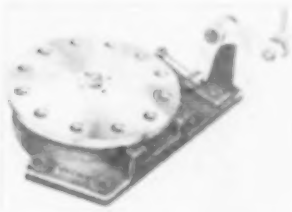
M.E. CUNNINGHAM CO.
SAFETY STEEL STAMPS

99 East Carson Street - Pittsburgh 19, Pa.

IEN - 3137

PRESS TOOLS . . Indexing dial feed provides 12 stations on 12-in. table

Source: deCASTRO & ASSOCIATES
1555 Santa Fe Ave., Los Angeles 21, Calif.



IEN - 3138

SCREW DRIVING . . Tool steel bits for power tools. No. 1 to No. 14 screws

Source: DONOVAN CO
50 Blackhawk Road, Beaver Falls, Pa.

IEN - 3139

STAPLING . . Plier type tool has leverage to drive heavy staples

Source: BOSTITCH INC
549 Mechanic St., Westerly, R. I.

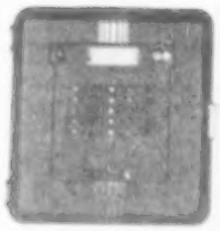
IEN - 3140

SEND FOR YOUR COPY TODAY

Logan Conveyors

LOGAN CO. 200 CABEL ST. • LOUISVILLE 6, KY.

IEN - 3141



Speedomax Indicator

checks dozens of temperatures . . . fast

The Speedomax indicator gives temperature readings from as many locations as desired . . . over a hundred if necessary. Just flip the switches and the drum scale spins quickly and surely to the correct temperature. Scale provides well-spaced divisions for rapid and accurate reading. The instrument's electronic circuit gives high sensitivity even for low temperatures and short ranges.

For further information, write Leeds & Northrup Company, 4905 Stenton Avenue, Philadelphia 44, Pennsylvania.

LEEDS & NORTHRUP

IEN - 3142

SLASH CLEANING and COOLING COSTS with REX FLAT SPRAY NOZZLES

REX FLAT SPRAY NOZZLES

IEN - 3143

Electroforged into one piece for STRENGTH

and SAFETY

NON-SLIP — the twist does the trick

WRITE FOR BULLETIN 2245

BLAW-KNOX DIVISION of Blaw-Knox Company
2050 Farmers Bank Bldg., Pittsburgh 22, Pa. — Offices in Principal Cities

BLAW-KNOX ELECTROFORGED STEEL GRATING

IEN-3144

IEN-3145

IEN-3146

IEN-3147

TESTING . . Electronic comparator checks metal composition with standard

Source: FISHER SCIENTIFIC CO.
715-19 Forbes St., Pittsburgh 19, Pa.

Storbarter

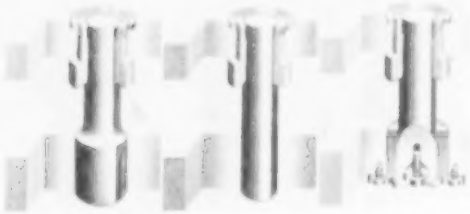
A sample [illegible]

List price [illegible]

IEN-3148

PRESS TOOLS . . Guide bushings for shoulder, straight, removable pins

Source: LAMINA DIES & TOOL INC.
14923-7 W. Eleven Mile Road, Berkley, Mich.

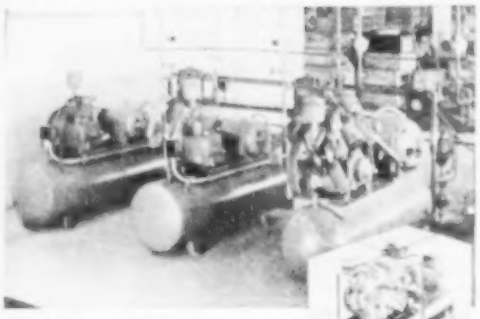


Four sizes [illegible]

An oil groove [illegible]

Price List No. [illegible]

IEN-3149



Decentralize

AIR SUPPLY FOR SAFETY

INSURE continued production without danger of interruption due to lack of air by decentralizing air supply in your plant. Install a Wayne in each department using air. These units will pay for themselves quickly. Write today for catalog of Wayne Industrial Air Compressors.

THE WAYNE PUMP COMPANY
[illegible] Fort Wayne 6, Indiana

NATIONWIDE SERVICE
LIFTS · HOSE REELS · BULK PUMPS

IEN-3150

IEN-3151

SYNTHETIC SAPPHIRE for

Resistance to Wear

Outwearing hardened steel and cemented carbides up to 5000 times.

Resistance to Friction

Affording very low friction characteristics due to hardness and surface continuity.

Resistance to Heat Distortion

Retention of form at temperatures up to [illegible] C.

Retention of Insulating Properties

Excellent dielectric properties over a wide range of temperatures.

Synthetic Sapphire can be polished to flawless diamond polishing; it can be brazed and bent to flame. Polished sapphire surfaces keep free of dirt, lint, and in many anti-friction applications need not be lubricated.

Call or write the Linde office nearest you for copies of the "Synthetic Crystals Properties Sheet" and the "Synthetic Crystal Stock List."

THE LINDE AIR PRODUCTS COMPANY
[illegible]

IEN-3152

HOW TO MAKE

NEW SAVINGS IN OLD FURNACES

"I FORMED FURNACE ARTICLE" [illegible] ANSWER: MY FUEL BILL ON EACH HEAT BY [illegible] BOSHES." [illegible]

[illegible] B&W Insulating Firebrick. Here's why B&W ITB [illegible]

Lightweight B&W ITB store and conduct less heat than any other insulating firebrick. They reach operating temperature quickly, reducing cycle time and fuel costs.

B&W ITB stand up longer because of their high resistance to flame impingement and chemical attack.

No matter what use in furnace equipment B&W Insulating Firebrick can usually save you money [illegible] Write today for [illegible] B&W Insulating Firebrick.

THE BABCOCK & WILCOX CO.
REFRACTORIES DIVISION
85 LIBERTY STREET, NEW YORK 6, N. Y.
WORKS: Augusta, Georgia

IEN-3153

Parker-Kalon GROUND THREAD Socket Set Screws

SET RIGHT with SHOP MEN

RIGHT START

RIGHT FINISH

RIGHT FIT

RIGHT BUT

SEE FOR YOURSELF!

P-K

PARKER-KALON

cold forged

SOCKET SCREWS

IEN-3154

Model A—Bench Type

Model B—Pedestal Type

DETROIT POWER SCREWDRIVER CO.

3418 WEST FORT ST. DETROIT 16, MICH.

IEN-3156

CLEANING . . Portable vacuum machine serves 1½-in. 50-ft. suction hose

Source: U. S. HOFFMAN MACHINERY CORP.
103 Fourth Ave., New York 3, N. Y.

Hoffco Vac No. 30

Mounting

IEN-3157

CONNECTOR . . Electric collector transmits high current at low voltage

Source: SCIAKY BROS. INC.
4917 W. 67th St., Chicago 38, Ill.

Silver contacts

The rectangular plate

IEN-3158

RUEMELIN BLAST GENERATORS

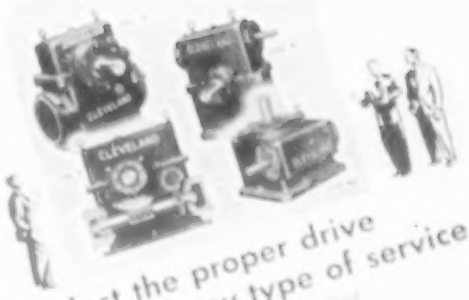
A practical low cost sand blast unit by plant engineers for maintenance work. Clean rust, paint, make new paint, varnish fittings, penetrating buildings, stripping paint from floors, fine saw frames, railroad cars, structural steel, storage tanks, cleaning bulkheads, etc. Can be fitted with Wet Adapt and Nozzle for wet cleaning work.

Write for Bulletin 18-R

RUEMELIN MFG. CO.
1554 N. Palmer St.
Milwaukee 12, Wis.

Manufacturers and Engineers
SAND BLAST AND DUST COLLECTING EQUIPMENT
WELDING FUME COLLECTORS

IEN-3159



To select the proper drive for any type of service

CLEVELAND Worm Gear Speed Reducers

IEN-3160

Is this the solution to your lubrication problems, too?

Write for these FREE bulletins

FARVAL

CENTRALIZED SYSTEMS OF LUBRICATION

IEN-3161

NEW

SIGNODE TOOLS

FOR STRAPPING SMALL BUNDLES

THIS SEAL MEANS SIGNODE SECURITY IN SHIPPING

▼ REPRINT—Identify by IEN-3162 if you write the maker ▼

New!

Dings SELF-CLEANING PERMA-PLATE MAGNET

COMPLETE AUTOMATIC PROTECTION AGAINST SCRAMP IRON DAMAGE!

- CLEANS itself
- SAVES LABOR—SAVES TIME!
- EXTREMELY POWERFUL!
- MODERATE PRICE
- RUGGED CONSTRUCTION
- GEAR HEAD MOTOR DRIVE!
- MAGNETIC PERMANENCE GUARANTEED FOREVER!

NOW!

DINGS MAGNETIC SEPARATOR CO.
4761 W. McGeogh Ave. Milwaukee 14, Wis.

Dings

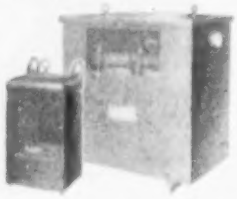
▼ REPRINT—Identify by IEN-3163 if you write the maker ▼

WAGNER TRANSFORMERS

SAFE POWER

Low Cost, too—

WITH Wagner DRY-TYPE TRANSFORMERS



General purpose dry type transformers are available in ratings from 1 to 250 kva, 600 volts and below, single phase, two coil, Type SA, and from 1 to 300 kva, 600 volts and below, three phase, two coil, Type AP. Type AA Autotransformers are also available.

Wagner Electric Corporation

6414 PLYMOUTH AVENUE
ST. LOUIS 14, MO.

ELECTRICAL EQUIPMENT AND AUTOMOTIVE BRAKE PRODUCTS

▼ REPRINT—Identify by IEN-3164 if you write the maker ▼

BIN-FLO

Provides
STEADY FLOW
of Bulk
Materials

New pending device provides uniform steady flow of most dry finely ground materials from bins, hoppers, silos and pits.

BIN-FLO units are located at points of controlled flow. Low pressure air supply may be controlled by BIN-DICATORS.

THE BIN-DICATOR COMPANY
15956 Kercheval Avenue Detroit 15, Michigan

▼ REPRINT—Identify by IEN-3165 if you write the maker ▼

PUMP . . Deepwell turbine design, 28 to 87 gpm., free outlet from 150 ft.

Source: BYRON JACKSON CO.
P. O. Box 2017-A, Term. Annex, Los Angeles 54, Calif.

Bee-Jay is a new turbine pump for operation at 1750 rpm. in deepwell applications. It can take care 2 to 5 hp., the smallest opening a 5-in. well and the other, three a 6-in. well. The pump is available for direct delivery on a line or for use with a pressure tank. The design features wear tolerance in the rubber bearings through which the shaft extends. Available as independents include a vertical hollow shaft motor as shown in the illustration, direct drive through a gear head or a belt drive.

Bulletin 50-5150, 8 pages, presents section view with parts list, description covering construction, operation, capacity.

▼ REPRINT—Identify by IEN-3166 if you write the maker ▼

HANDLES . . Made of malleable iron in crank, offset and straight designs

Source: REID TOOL SUPPLY CO.
707-11 Baker St., Muskegon Heights, Mich.

Lengths range from 4 in. to 18 in. in this new line of handle shapes and sizes. Each is supplied in three sizes to purchase as required for a given application. The handle also has one hand rest. It will not bend when a great torque can be felt for turning operation.

▼ REPRINT—Identify by IEN-3167 if you write the maker ▼

TRUCK . . Four wheel hand unit with ladder for stock or tool room

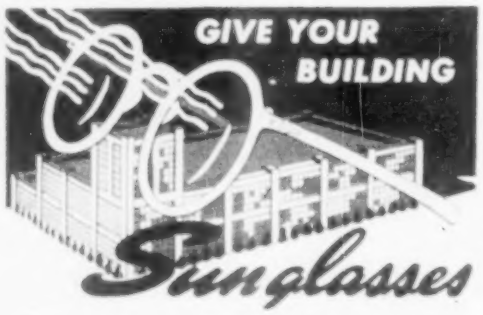
Source: NUTTING TRUCK & CASTER CO.
2010 Division St., Faribault, Minn.

Safety Lad-O-Truck is a new assembly of steel-equipped steel truck mounted on rubber-tired wheels and carries and a step ladder, also made of steel, that rides in a recess in the truck. The ladder can be locked into place when the truck is in use. The ladder feature is for the workers who, in the course of their work, must climb to the floor. It covers an approximate 10-ft. ceiling and is well suited on the truck if necessary to reach items stored on high shelves.

The ladder steps have safety treads. The ladder feature can be folded and stored in position when not in use. The floor

All Makes of These And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 30

▼ REPRINT—Identify by IEN-3168 if you write the maker ▼



Stop Glare with Glare Reducing COOLITE Glass by Mississippi

Eye fatigue and impaired vision hampering workers, lower efficiency and slow production. Modernize with DR COOLITE Glass. Cooling comfortable light ... relaxed eye's heat ... while cutting painful glare, double or triple. Test Coolite in your plant by replacing with DR Coolite in a window where glare is a troublesome factor. A test will convince you.

Coolite is made with a homogeneous medium or one tube and in two thicknesses, "A" and "B". "A" Coolite is available with or without wire.

Send today for free samples and latest catalog containing complete specifications, data, heat absorption, measurement tables, etc.

COOLITE

MISSISSIPPI Glass COMPANY
SAINT LOUIS 7, MO.
NEW YORK • CHICAGO • FULLERTON, CALIF.
World's Largest Manufacturers of Rolled, Figured and Wired Glass

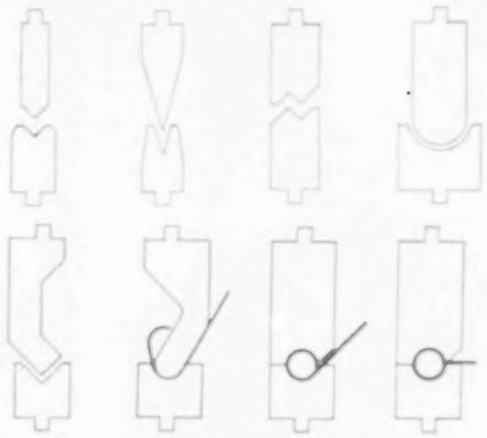
▼ REPRINT—Identify by IEN-3169 if you write the maker ▼

PRESS BRAKE FORMING DIES

PROMPT DELIVERY

Any metal—any gage—to fit any make of machine

Here are a few examples:



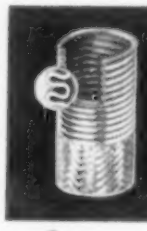
RAFTER MACHINE COMPANY, INC.
SINCE 19[illegible]
249 Stephens Street Belleville 9, N. J.

COLD ROLL FORMING MACHINES AND GANG SLITTERS

▼ REPRINT—Identify by IEN-3170 if you write the maker ▼

CMH REX-FLEX

corrugated stainless steel flexible metal hose



For conducting searching and corrosive liquids and gases.

For absorption of extreme cycles of vibration, flexation and variplane motions.

REX-FLEX offers all the outstanding characteristics of stainless steel in a variety of hose types. Light in weight ... high in strength ... leak-proof ... highly resistant to corrosion ... extremely flexible. It is easy to install and may be bent in multiple planes by hand. It is a "natural" for all flexible stainless steel hose and tubing installations.

Write today for complete information on REX-FLEX stainless Steel Flexible Hose—ask for specifications and data sheets.

CHICAGO METAL HOSE CORPORATION
MAYWOOD, ILLINOIS
Plants at Maywood, Elgin and Rock Falls, Illinois

▼ REPRINT—Identify by IEN-3171 if you write the maker ▼

NEW Finishes MORE Quality Features

When you hear notes rave about PROTO® adjustable and pipe wrenches—it's no "bull." Special steels and Elkrom handles give extra strength. Smooth-operating knurls and thin, tight jaws make the adjustables faster than a bullfighter on a bicycle. Full-finish wrenches now have lustrous chrome plating. Buy needed adjustable and pipe wrenches from your PROTO® dealer. Write for catalog to

PLOMB TOOL COMPANY
22715 Santa Fe Ave., Los Angeles 54

PROTO® means PROfessional Tools. It's the new name for the tools that have been preferred for 43 years.

PROTO TOOLS
LOS ANGELES

▼ REFER—Identify by IEN-3172 if you write the maker ▼

▼ REFER—Identify by IEN-3173 if you write the maker ▼

WRITE TODAY FOR CATALOG 50 which shows Chromalox Tubular Heaters and the complete line of other industrial heaters for every use.

EDWIN L. WIEGAND CO., 7606 THOMAS BOULEVARD, PITTSBURGH 8, PA.
See Chromalox Heating Unit Advertisement Page 5

CHROMALOX
ELECTRIC HEAT FOR MODERN INDUSTRY

▼ REFER—Identify by IEN-3174 if you write the maker ▼

Put these advantages in your product with *Marvinol*®

In handbags & jewelry — in mouldings & and products, Marvinol is giving powerful the characteristics that more sales. Marvinol formulations are vinyl resins base, light and tough — have high dimensional stability, greater low-temperature flexibility, outstanding resistance to tear, wear, oils and acids. Let us show you how to utilize Marvinol's time-saving advantages. All technical information developed in our modern laboratories is at your disposal since it is through you that Marvinol reaches the consumer.

Write today for the latest technical information. Dept. I-8, Naugatuck Chemical, Naugatuck, Conn.

Marvinol

Naugatuck Chemical

DIVISION OF U. S. RUBBER COMPANY

▼ REFER—Identify by IEN-3175 if you write the maker ▼

SEPARATING . . Magnetic pulley and non-magnetic vibrated feed vanes

Source: ERIEZ MFG. CO.
1503 E. 12th St., Erie, Pa.

New assembly of one of the magnetic pulleys [illegible] and a set of non-magnetic vanes [illegible] that cause the vanes to vibrate. A magnet is magnetized [illegible] of magnetic material from mixed magnetic [illegible] non-magnetic. Examples are separation for recovery of [illegible] grindings from abrasives, [illegible] of metallic [illegible] magnetic materials from the rest in [illegible] operations, separation of magnetic from non-magnetic materials and [illegible] of fluids. An assembly [illegible] 8" to 12" in pulley will handle about 1,000 lb. [illegible] of material per hour. Pulley speeds to 45 or [illegible] per minute.

Material feeds to the vanes from a vibrating feeder supplied by the user. It spreads over the vanes and moves toward the magnetic pulley. Non-magnetic particles are caused to "walk" out of the magnetic pulley while the non-magnetic material flow through a gap to a second pulley that again advances it toward the magnetic pulley. In this way the rest of the magnetic material is attracted to the pulley surface while the non-magnetic material falls to the floor or [illegible].

▼ REFER—Identify by IEN-3176 if you write the maker ▼

VALVE . . Hydraulic relief design vents excess pressure, to 5,000 pounds

Source: PANTEX MFG. CORP.
Box 660-A, Pawtucket, R. I.

New valve [illegible] to [illegible] in pressure [illegible]. It is installed on [illegible] section, on the [illegible] and [illegible]. The [illegible] threaded [illegible] to a [illegible] thread [illegible]. The valve [illegible] closed normally. It opens [illegible] pressure [illegible] when the pressure has been reduced to normal. Operation is free from chatter or noise in a cushioning action.

The assembly consists of a housing suitable for the given pressure and an inner spring-type poppet cartridge that threads into place as only an inverted actuating stem projects from one end. This cartridge is changed for changing pressure ranges. Three cartridges being available for three pressure ranges between 100 lb. and a maximum of 5000 pounds.

Maximum flow at maximum pressures of 250, 2,000 and 5000 lb. is 16, 30 and 35 gpm. Minimum flow at minimum pressures of 100, 375 and 1000 lb. is 6, 11 and 16 gpm. Three cartridges have ¾, ⅞ and 1" connections. Overall weight is about 15 lb. Operating and closing time is 0.02 to 2 seconds, [illegible] Operating temperature 0° [illegible]

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 50

▼ REFER—Identify by IEN-3177 if you write the maker ▼

SAFETY EQUIPMENT FOR ALL INDUSTRIES

IPCO M & M RAIL CLAMPS

Used for car stops, on loading platforms, temporary sidings, cars on grades and traveling cranes.

THIS — The Dangerous Way

OR THIS — THE SAFE WAY

Write for Bulletin E-40

Used and recommended by leading Steel Companies, Manufacturing Plants, Mines, Grain Elevators, Coaled Plants and Quarries.

IPCO Safety Equipment for all Industries

INDUSTRIAL PRODUCTS COMPANY

2801 N. FOURTH STREET • PHILADELPHIA 33, PA.

▼ REFER—Identify by IEN-3178 if you write the maker ▼

Makes Trays and Cartons

from inexpensive blanks

NO GLUING

[illegible] of the TRAY-LOCK machine [illegible] making large savings because:

1) The machine permits the use of inexpensive blanks that require no gluing.

2) It sets up cartons at speeds up to 70 per minute and requires one operator. One person easily supplies the machine with blanks.

Quickly adjustable for a wide range of sizes. Sets up trays and cartons of various types that are suitable for a great variety of products.

Write for Leaflet

PALMER DIVISION

PACKAGE MACHINERY COMPANY
SPRINGFIELD, MASSACHUSETTS
NEW YORK · CHICAGO · BOSTON · CLEVELAND · ATLANTA · DALLAS · DENVER · LOS ANGELES · SAN FRANCISCO · SEATTLE · MEXICO, D.F.

▼ REFER—Identify by IEN-3179 if you write the maker ▼

Ward Leonard's new [illegible] Combination Magnetic Starter with Disconnect Switch is front-operated by a handle on the door.

This means more compactness for "gang" mounting, greater convenience and safety in operation.

Safer, too. Switch throws to full on and off — no dead center. Mechanical interlock prevents opening door with switch on.

Write for Bulletin [illegible]. Ward Leonard Electric Co., 31 South Street, Mount Vernon, New York. Offices in principal cities of U. S. and Canada.

WARD LEONARD ELECTRIC CO.
Result-Engineered Controls
RESISTORS • RHEOSTATS • RELAYS • CONTROL DEVICES

▼ REFER—Identify by IEN-3180 if you write the maker ▼

SINK DRAIN-TRAP BENDS PRODUCED

2½ TIMES FASTER

WITH PINES Automatic BENDING MACHINE

[illegible] Rate Taking [illegible] Produced to Rate of 600,000 Per Hour

COST SAVING FEATURES

Input of Rate Need is [illegible] Degree

Write for Free Literature

PINES ENGINEERING CO., Inc.
Specialists in Tube Fabricating Equipment
[illegible] MARKET, AURORA, ILL.

IEN - 3181

Two machines ROUTER & SHAPER for the price of one

STANLEY

Hardware Tools, Electric Tools, Steel Strapping, Steel

IEN - 3182

WHATEVER YOU FASTEN . . .

OR ANY COMBINATION OF THESE MATERIALS

Chicago **AUTOMATIC RIVETING**

FASTENS IT RIGHT . . . AND FASTENS IT FAST

• In Chicago Automatic Rivet Setters from 1 to 4 tubular or split rivets are fed, inserted and clinched to a fraction of a second with each operating pedal release. Adjustment on some models permits fastening different metal rivets. Riveting machine also adaptable for eyelet gun, motor drive screws.

***FREE** Fastening Analysis*

Your output may be increased and cost reduced if motion study and simple assembly and blue print.

Chicago Rivet

CHICAGO RIVET & MACHINE CO.

9602 W. Jackson Blvd., Bellwood, Ill. CHICAGO SUBURB

Tubular and Split Rivets In All Rivet Metals

IEN - 3183

Reduce Machine Noise and Vibration 60%-85%!

ANCHOR MACHINES ON ***UNISORB***

Yes, and UNISORB machine-mounting requires no bolts . . . no lag screws . . . no destructive floor-drilling. It's the modern way to anchor machines . . . saves installation costs . . . lasts for years and years with no maintenance . . . easy to replace . . . prevents vibration damage to floors, buildings and machinery.

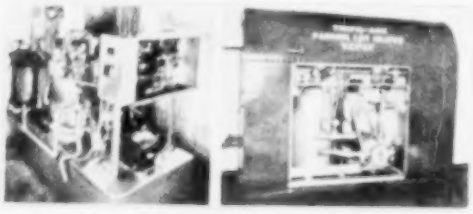
Today, write for your free copy of "Why It Pays To Anchor Your Machines with UNISORB."

The **FELTERS** Company
210-1 SOUTH STREET
BOSTON 11, MASS.

IEN - 3184

HEATING . . Assembly of boiler and heater for outdoor truck storage

Source: VAPOR HEATING CORP.
78-82 E. Jackson Blvd., Chicago 4, Ill.



Trucks and buses that have to be started in the open are protected from freezing by the combination from their engine heating equipment. In a single unit it covers the oil pan, heater, it consists of an oil fired steam boiler, steam heater and required controls for unattended operation. It is wired plug in from some wall outlet, or and to 10 amps 20 hours in any weather. The boiler requires about fuel oil.

Designs are available in a limited [illegible] and without the heating to apply [illegible]

IEN - 3185

INSULATING . . Aluminum foil bonded to asbestos for pipes and ducts

Source: REFLECTAL CORP.
155 E. 44th St., Rm. 2007, New York 17, N. Y.

Sample available upon request

Alfol Asbestos is [illegible] [illegible] [illegible]

IEN-3191

In
AIR CYLINDERS

It's MUSCLE you need!

AIR CYLINDERS

Are all Muscle. No Useless Frills! JLE Air Cylinders invite cost comparison . . . tell us the size cylinder you're interested in or are using and we'll give you JLE's cost figure for comparison.

JLE Air Cylinders are made to any stroke in standard bore sizes from ½" to 10"—Top operating pressure 110 lbs. per sq. in. Single or double acting. Choice of four standard mountings and of end cushioning.

Distributor Territories Open . . . Best Ones Going Fast
Write Us Your Qualifications NOW

JAMES L. ENTWISTLE CO.
410 CHURCH STREET, PAWTUCKET, R. I.

IEN-3192

Greater capacity
in existing conduit with
DENSHEATH
small diameter wire

DENSHEATH*
(Type TW) Thermoplastic covering

the right wire for the job ANACONDA® WIRE AND CABLE
*Reg. U. S. Pat. Off.

IEN-3193

HERE'S COMPACT, DEPENDABLE, PRECISION-BUILT, MOTORIZED SPEED REDUCTION

The Philadelphia GearMotor is a self-contained, extremely compact unit that conforms to the recommended standards of the American Gear Manufacturers Association and National Electrical Manufacturers Association . . . Available in single, double and triple reductions . . . Range of speeds: 780 through 35 R.P.M. Motor Rating from 1 H.P. through 60 H.P. . . . AC or DC.

Send for new 42 page illustrated catalog and state the gear Reducer combination when writing for quote.

PHILADELPHIA GEAR WORKS, Inc.
Industrial Gears and Speed Reducers
Erie Avenue and C Street Philadelphia 34, Pa.
NEW YORK • PITTSBURGH • CHICAGO • HOUSTON
In Canada: Wilson & G. Smith Limited, Toronto

IEN-3194

GAGE . . Optical comparator projects both profile and work images

Source: EASTMAN KODAK CO.
341-5 State St., Rochester 4, N. Y.

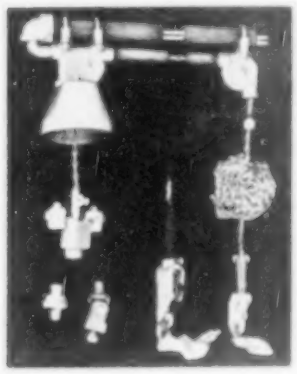
Contour Projector Model 2 is a new and unique comparator for the complete inspection of small machined parts, such as the U.S. 1000-50. This unit carries a magnified work surface or its 14-in. screen for comparing with the prototype work piece. The 10-mm objective is supplied as a standard accessory. Instrument adjusts the profile of the work. In the full-size image, only the part is shown, with no frame or other distractions to obscure the image. The screen is free from glare and the image is given at the standard power.

The new machine provides 14½ in. of work space between the screen and the objective. This leaves room for fixtures and tools to be placed on the work surface. The work surface measures 29 in. by 16½ in. and has 3 in. of vertical travel. The work measurements between the screen and the objective and the flat bed of the projection screen are made by means of the precision scales built into the instrument. A special wide-angle projection surface is fitted here. Magnifications to and 10 are possible. Any one of the magnifications between 10X and 50X can be selected by turning a knob located on the screen and switching.

IEN-3195

LIGHTING . . Disconnect hanger and equipment for lighting fixtures

Source: THOMPSON ELECTRIC CO.
1101-29 Power Ave., Cleveland 14, Ohio



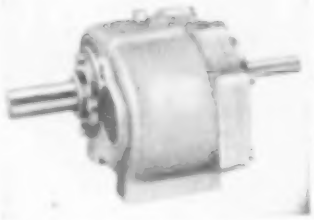
Ground level . . . being is possible for overhead electrical lighting fixtures by application of this new disconnect hanger, in fine, compact, permanently disengaged, cover of aluminum and a mounting bracket and connected equipment.

It has capacity for fixtures that weigh to 100 pounds. Initial lifting height allows the greatest series drop, the weight of which is not critical.

The unit parts are . . .

IEN-3196

IEN-3197



2-speed automatic TRANSMISSION

. . used to supplement constant-speed and multi-speed motors . .

with the advantages of providing broader range of speeds, and special ratios not obtainable electrically . . In the five horsepower [illustrated] model, with a 1750 rpm input speed, the low limit of reduction is 6.31 to 1 but any pre-selected ratio, from direct motor speed to this low limit, is obtainable . . . WESTERN Two Speed Automatic Transmissions are built to handle 5, 10, 15, 20, 25 and up to 50 horsepower motors . . . Send for complete information.

up to 50 h. p. WESTERN TRANSMISSIONS
WESTERN MANUFACTURING CO. • 5705 STATE STREET • DETROIT, MICHIGAN

IEN-3198

A simple STOCK answer to your drive problems

444 standard gear sets
Over 190,000 standard reducers
Only 58 standard mountings

The double concloping principle of Cone-Drive Gears also gives you higher load capacity, longer life, less weight, greater compactness.

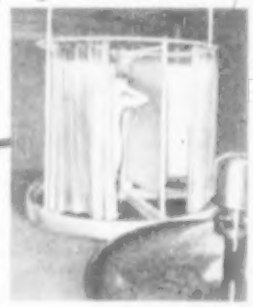
All parts for a given center distance gears, mountings, bearings, housings, fan-cooling attachments and water cooling coils (for continuous high load operation) etc. . . are standardized whether you use pinion over or under, gear shaft vertical or horizontal, single or double extended shafts, right or left hand.

Complete specifications and prices on request. Please give approximate hp. speed, motor speed, ratio and approximate operating which would be required.

CONE-DRIVE GEARS

IEN-3199

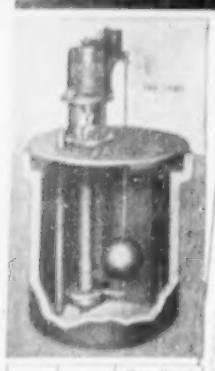
80% Fewer Piping Connections with BRADLEY MULTI-STALL SHOWERS



BRADLEY multi-stall showers

RAFFITT—Identify by IEN-3200 if you write the maker

INSURANCE AGAINST DAMAGING WATER DRAINAGE



TABER industrial sump pump has many applications as an economical insurance against the damage of drainage water. With an 1st, 2nd or 3rd choice and a No. 1 or No. 2 Taber Sump Pump, you actually buy a very definite protection in an economical and efficient way.

FOR COMPLETE INFORMATION write today for your copy of BULLETIN 4-10

Model	G.P.M.	Max. Head in Feet
No. 1	10	17
No. 1	15	21
H.P.	20	19
Motor	20	31
	25	16
No. 2	20	40
H.P.	25	25
Motor	30	23
	40	23

Taber Pump Co.
ESTABLISHED 1887
268 ELM STREET, BUFFALO 3, N. Y.

RAFFITT—Identify by IEN-3201 if you write the maker

SPRING TESTING: The Solution of Many a Baffling Problem!

Here's Why!

When the performance of good springs with a spring mechanism raises expensive has proved that the most likely source of the trouble is the spring. It may be that certain springs are out of square, or have hidden flaws in the wire, or may be too weak or too strong for their intended purpose. Check the springs FIRST! You'll find it will save you many tedious hours of hit-and-miss trouble shooting.

LINK Spring Testers

For tensile and torsion testing of springs—compression, torsion or torsion—get a LINK Spring Tester. Hand operated instruments for spot-check, laboratory, and inspection. Also motor-driven instruments for production testing. Moderately priced. Send for complete information.

LINK INDUSTRIES
13040 Elmira Detroit 27, Mich.

Write for Catalog

RAFFITT—Identify by IEN-3202 if you write the maker

Want Chains 25% Stronger ...That Last Far Longer?

Here's how to get more chain life under severe operating conditions: REX Z-METAL is 25% stronger than the best quality malleable iron—and it's tougher, harder, and more resistant to corrosion.

Z-Metal Bowlon minimizes wear—its strength handles heavier loads—its resistance to corrosion minimizes downtime. Z-Metal chains are identical in their malleable counterparts in both dimensions and weights.

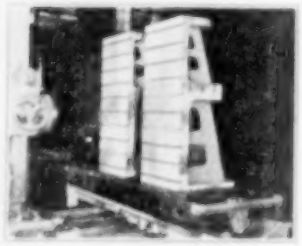
Both Rex Chains are available in Z-Metal. Mail the coupon for all the details.

DRIVE AND CONVEYOR CHAINS

RAFFITT—Identify by IEN-3203 if you write the maker

BORING . . Precision angle plate positions work to bore, drill, mill

Source: PORTAGE MACHINE CO.
1029-33 Switzer Ave., Akron 11, Ohio



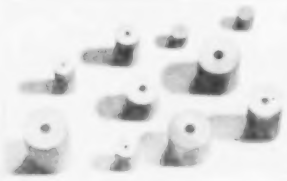
Two sizes are available to use together or singly in the company's new design of work positioning angle plates. One measures 24 by 24 in. in width and height, 18 in. in depth at the base and 12 in. at the top. The other is 24 by 36 in. in width and height, by 26 in. in same depth and 18 in. at the top of the split.

Both are made of normalized cast iron, finish machined on all faces and edges. Reinforcing ribs provide rigidity. The slots are machined to Tube American Standard ⅝ in. T Bolts on 6 in. centers.

RAFFITT—Identify by IEN-3204 if you write the maker

FORGING . . Carbide die nibs from stock for bolt heading machines

Source: CARBOLOY CO.
11167 E. 8 Mile Road, Detroit 32, Mich.



Seventeen sizes range from ⅜ to 1½ in. in outside diameter, from ⅝ to 2¼ in. in length in this new stock line of carbide die nibs. Centered wire hole diameter is .093 to .250 inch. The first seven are in Carboloy Grade 501, the larger nibs in Grade 599.

RAFFITT—Identify by IEN-3205 if you write the maker

HEATING . . Belt type electric unit applies on steel drum to heat contents

Source: ACRA INDUSTRIAL ELECTRIC CO.
3003 Ravenswood Ave., Chicago 13, Ill.

List price is $19.50 for this new belt-type Acrawat heater for application around a 55-gal., 22¼ in. steel drum. The electric element in the assembly is tightened, in place and the three-heat switch is turned on to apply heat to the material held in the drum. Heat rating is 750, 1,500 and 3,000 watts in the three switch positions based on operation with a 230-volt power source. Belt width is 1 inches. It is made of aluminized steel to withstand a salt-bath/chrome enamel insulation is used.

All Makers of These And All Other Products Are Listed In THOMAS REGISTER . . Descriptions . . Ratings . . See Page 16

RAFFITT—Identify by IEN-3206 if you write the maker

Will you have WATER in case of fire?

Make sure that you do by storing a reserve in a Horton elevated tank. Since this reserve is stored above your plant, the force of gravity will maintain water pressure in the fire protection system at all times.

The tank shown at the left holds 100,000 gals of water at the Barber-Greene Company's Aurora, Illinois plant. Structures like this are built in standard capacities from 15,000 to 500,000 gals. When you write for quotations, state capacity required, height to bottom, location where tank is to be erected and type of insurance you carry.

CHICAGO BRIDGE & IRON COMPANY
2123 McCormick Building • Chicago 4, Illinois
Atlanta • Birmingham • Boston • Cleveland • Detroit • Houston
Los Angeles • New York • Philadelphia • Salt Lake City
San Francisco • Seattle • Tulsa
Plants in BIRMINGHAM, CHICAGO, SALT LAKE CITY and GREENVILLE, PA.

RAFFITT—Identify by IEN-3207 if you write the maker

IMPACT RESISTANCE

...is the final test

CESCO Super Safety lenses are guaranteed to impact or exceed Industrial specifications for optical quality and resistance to impact. In the laboratory, CESCO Supertype safety goggles withstand severe impact tests. On the job, hundreds of thousands of CESCO goggles have proved their strength and quality in use. Add comfort and durability as additional features of CESCO goggles and you can state: For Safety, use CESCO. Available with clear or filter lenses. Write for catalog showing CESCO's full line of safety goggles.

CESCO spectacle type goggles with or without cushions. Two-lens, the most popular Goggles design.

FREE!...

Send your name on company letterhead for "Safety News"—CESCO's family-size magazine.

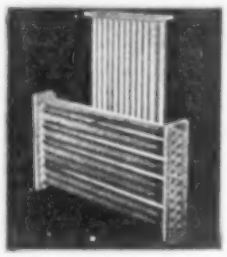
CHICAGO EYE SHIELD CO., 2356 Warren Blvd., Chicago 12, Illinois

CESCO FOR SAFETY

RAFFITT—Identify by IEN-3208 if you write the maker

ROME HELICAL-FIN TUBING

Over 90 Sizes in Production



Rome extended surface Helical Fin Tubing is a highly efficient—compact surface for heat exchanging work. It is supplied in either straight lengths, coils, or U bends with or without threaded end connections, or it may be used with standard flare connections. It is used for:

- Water Cooled Refrigeration Condensers
- Air Cooled Refrigeration Condensers
- Steam Condensers
- Dry Cleaning Fluid Recovery Condensers
- Air Compressor Intercoolers and Aftercoolers
- Oil Coolers for Diesel Engines
- Fan Type Air Heating Coils
- Fan Type Air Cooling Coils
- Air Type Economizers—Heat Heater
- Refrigeration Evaporators and Display Case Coils
- Turbine Air Intake Coolers
- Room Heating Convectors (Dual-purpose) Radiators
- Diesel and Fuel Engine Cooling Radiators
- Railway Diesel Engine Cooling Systems

Rome Helical-Fin Tubing is used and specified by nearly all large Nationally known manufacturers of heat exchanging equipment

ROME-TURNEY RADIATOR COMPANY
Mfrs. of Refrigeration Condensers—Concealed Copper Radiation
Rear Air Heating and Cooling Coils and Other Transfer Equipment
200 EAST FRONT STREET ROME, N. Y.

RAFFITT—Identify by IEN-3209 if you write the maker

MORE SPEED MORE SUPPORT

IF YOU OPERATE BAND SAWS

INSTALL

PADDOCK BALL-BEARING GUIDES

- Cut more materials—faster!
- Reduce Expense of Broken Blades!
- Protect Workmen!

Paddock Ball Bearing Guides

Give strong, friction-free support to working portion of the blade. Ball-bearing wheels spinning with the blade are non-changeable. You save many times the cost of installing Paddock Guides. Write today for complete details and prices.

PADDOCK TOOL CO.
Guide Makers Since 1920
1418 Walnut St. Kansas City 6, Mo.

Paddock BALL-BEARING BAND SAW GUIDES

▼ REPRINT—Identify by IEN-3210 if you write the maker ▼

LUNKENHEIMER
BAR STOCK STEEL NEEDLE VALVES
3000 lb. W.O.G. 150° F.

Fig. 1726—Globe ¼ to 1 inch

Fig. 1729—Angle ¼ to 1½ inch

CARBON STEEL
¼ to ½ inch sizes have 13% CR Stainless Steel Stem

For high pressure gas or liquid service. Widely used on orifice meters for measuring gas in the fields and in plants.

Recommended for natural and artificial gas, oil free from sulphur compounds, and for other fluids which do not attack carbon steel.

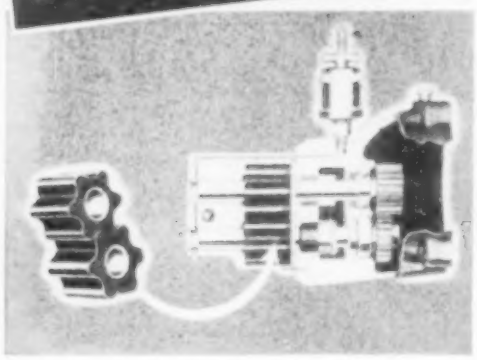
Call your Lunkenheimer distributor for prompt delivery.

Circular No. 568 illustrates the complete line of Lunkenheimer Needle Valves. Available on request.

THE LUNKENHEIMER CO.
CINCINNATI, OHIO, U.S.A.

▼ REPRINT—Identify by IEN-3211 if you write the maker ▼

Another product designed with Du Pont NEOPRENE



Resilient pump rotors of durable NEOPRENE permit passage of foreign particles—resist wear

Developed originally for marine applications, this unit has been adapted for use wherever liquids are contaminated with abrasive materials. The pump's extreme efficiency and durability under such conditions are due in large part to its rotor vanes made of neoprene, Du Pont's chemical rubber.

Neoprene's toughness and resilience permit particles of foreign matter to pass without causing rotor damage. And neoprene's outstanding resistance to aqueous fluids, abrasion, and permanent distortion—despite constant flexing—assures long, trouble-free service.

The fact that neoprene is specified in the design of so many new products is ample proof of the excellent properties that provide longer life and result in lower maintenance costs. So try neoprene first when you need a resilient part. While Du Pont does not make any finished parts of neoprene, we'll gladly help you find a supplier. E. I. du Pont de Nemours & Co. (Inc.), Rubber Chemicals Division, Wilmington, 98, Delaware.

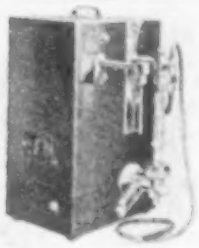
FREE! THE NEOPRENE NOTEBOOK

NEOPRENE
The rubber made by Du Pont since 1932
DU PONT
BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

▼ REPRINT—Identify by IEN-3213 if you write the maker ▼

PACKAGING . . . Filling machine measures liquids into vials, ampules

Source: S. ROSEN & ASSOCIATES
5003-7 Queensbury Ave., Baltimore 15, Md.



Electric motor [illegible]

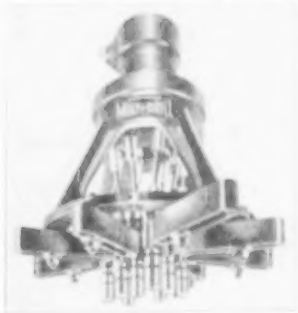
Operation [illegible]

The machine [illegible]

▼ REPRINT—Identify by IEN-3214 if you write the maker ▼

DRILLING . . . Multiple-spindle head, adjustable design has 6 or 8 spindles

Source: COMMANDER MFG. CO.
4223-7 W. Kinzie St., Chicago 24, Ill.



New assembly of the company's [illegible] Model [illegible] [illegible] spindle head [illegible] Construction [illegible]

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . . Descriptions . . . Ratings . . . See Page 50

▼ REPRINT—Identify by IEN-3215 if you write the maker ▼

Stanzoil NL-34

New Worker Comfort in This Elastic Knit Lined Neoprene Glove

This Stanzoil Duplex NL-34 is designed expressly for, and is sold only to, industry. Elastic-knit lining stretches with every hand movement, gives new worker comfort and protection, more freedom than old-style flannel linings. Slip on and off easy as a cloth glove. Non-slip finish holds oily objects in a sure grip. Chocolate-brown DuPont Neoprene resists damage from oils, acids, caustics. Stanzoil NL-34's give you comfort and protection at lower cost per hour. Sizes small, medium and large. Larger Duplex Gloves, Catalog Nos. NL-42 and NL-52. Ask your supplier or write for informative catalog today.

Synthetic Rubber Division
The Pioneer Rubber Company
635 Tiffin Road Willard, Ohio, U.S.A.
Los Angeles, California

STANZOIL PIONEER
OVER 38 Years OF QUALITY GLOVE MAKING

▼ REPRINT—Identify by IEN-3216 if you write the maker ▼

New CLASS 9080 TYPE BD

MAGNETIC UNLOADER

Provides POSITIVE unloading of air compressor at end of operation or when voltage failure occurs

FEATURES

• [illegible]

• [illegible]

• [illegible]

Write for Bulletin 9045. Square D Company, 4041 N. Richards Street, Milwaukee 12, Wis.

SQUARE D COMPANY

▼ REPRINT—Identify by IEN-3217 if you write the maker ▼

ADAMS Aftercooler and Cyclone Separator

Dry, Moisture-Free, Oil-Free Air . . .

for your Compressed Air Tools

[illegible]

Write for Bulletin 70-1

R. P. ADAMS CO., INC. 219 E. PARK DRIVE BUFFALO 17, N. Y.

▼ REPRINT—Identify by IEN-3218 if you write the maker ▼

an electrical cable is no better than its

[illegible]

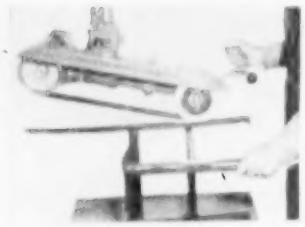
THE BEST CABLE IS YOUR BEST POLICY

OKONITE insulated wires and cables

IEN-3219

TAYLOR MADE Chain

IEN-3220



A 100 POUND GIANT . . . NEW AS NEW CAN BE

Never has there been a machine to equal this Marschke Swing Belt Machine for honest-to-goodness "light-weight" grinding and a lot of polishing jobs. Weighs only 100 pounds . . . yet produces a volume of sparks that proves the work it does. What work? For weld mam, spot weld and burr cutting—it's a honey. For removing rust, dirt particles, air bubbles and other surface blemishes—it's a lulu.

Well balanced . . . maneuverable . . . hands . . . easily manipulated. You ought to see the pictures showing its versatility . . . get the details on this "little giant."

VONNEGUT MOULDER CORPORATION
1827 MADISON AVENUE · INDIANAPOLIS 25, INDIANA

IEN-3221

ANCHOR "*piano hinge*" PAN TYPE CONVEYOR

OVERLOAD SAFETY CUT-OUT

ANCHOR STEEL AND CONVEYOR CO.
6906 Kingsley Ave., Dearborn, Mich.

IEN-3222

HANDLING . . Roll equipped platform for cable, wire rope, belting, fence

Source: METZGAR CO.
417 Douglas St. N. W., Grand Rapids 4, Mich.

Materials packaged in coils or on reels too heavy to handle by hand can be rolled onto plate on this new platform for free rotation on the supporting posts on the platform. The steel assembly represents recent additions to the company's previously announced equipment for similar purposes. Two new sizes are available. **Rolls** are mounted on ball bearings and measure 5 in. in diameter by 22 and 40 in. in length. The tong is made of a flat plate 6 x 3/8 in. above the floor. Overall frame width is 26 and 17 in. The two can be adjustable for quick fingering. Rolls 30 in. in 8 feet. Weight capacities are 2 and 4 tons. Assembly weights are 240 and 290 pounds. Cable flow Co. Co. in the diagram.

IEN-3223

TUBE . . Resistance welded steel, to specification, 1/2 to 3 in. od.

Source: WALLINGFORD STEEL CO.
49 Valley Road, Wallingford, Conn.

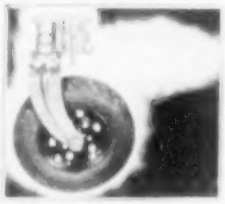
Work is done on McKay machine

New service based on years of experience production equipment machine. The tube going to customer by requests from old supply manufacturers would were taking in a variety of sections, sizes and weights. Production can be set up in quantities, cutting, slots, and notches and welded pieces. Available through Conn SAE 1010 to 1020 steel size to 0-3 in. in outside diameter. Wall thickness is 20 to 11 gage. Plain tubes in the lengths are punctures at 4 feet.

IEN-3224

CASTER . . Retractable design for single axle trailer equipment

Source: UNITED MFG. CO.
9-13 W. Interstate St., Bedford, Ohio



Load capacity is 0.5 or 1.0 in. to 10,000 lbs. (2,500 lbs.) [illegible] in a case of two guy 2,500 lbs. 6 [illegible] 1000. The wheel [illegible] and ship in assembled [illegible] Wheel diameter is 6 in. and the [illegible] 1 1/2 in. [illegible] Load [illegible] 1000 [illegible] 1 1/2 [illegible] 1 1/2 [illegible] 1 1/2

IEN-3229

8-Page
Condensed Catalog

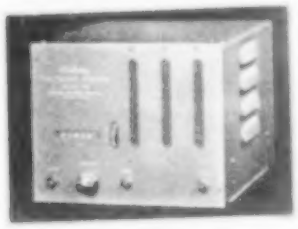
shows Veeder-Root Counters for mechanical, electrical and manual operation. Write for a free copy.

VEEDER-ROOT INC.
HARTFORD 2, CONNECTICUT

IEN-3232

COUNTING . . Electronic equipment has speed to 10,000 counts per second

Source: BERKELEY SCIENTIFIC CO
Nevin & Sixth, Richmond, Calif.



Model 110 is a [illegible]

Advance bulletin [illegible]

IEN-3235

IEN-3230

Why . . . MOBILIFT IS MORE MANEUVERABLE

1 NO GEARS TO SHIFT . . .

2 SHORT TURNING RADIUS . . .

3 COMPACT CONSTRUCTION . . .

DISTRICT SALES OFFICES
New York Berkeley
Atlanta Chicago
Los Angeles Dallas

MOBILIFT
"The MIGHTY MIDGET"

MOBILIFT CORPORATION
835 S.E. Main St., Portland 14, Oregon I.E.N.

Please send me your illustrated folder on Mobilift operation.

Name
Firm
Address
City State

IEN-3233

CYLINDER . . Double-acting hydraulic rates 7½ to 100 ton in "push" service

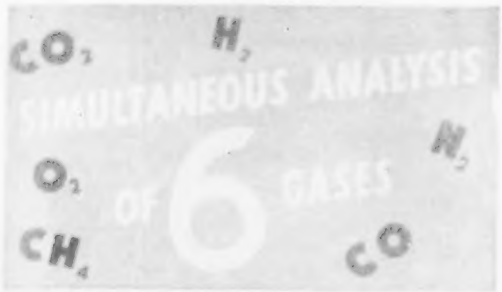
Source: HANNIFIN CORP.
1108 S. Kilbourn Ave., Chicago 24, Ill.

Bore [illegible]

The piston [illegible]

In Thomas Register: All Makes of Pipe, Tubing, Hose, Fittings, Valves, Pumps, Gauges, Meters, Regulators, Controls, Instruments, Recorders, Descriptions, Ratings, Prices, Specifications, Illustrations, Catalogs, Data Sheets, Bulletins, Manuals, Drawings, Photos, Charts, Tables, Formulas, Data, Facts, Figures, Information

IEN-3238



The Cambridge Recording Gas Analyzer can continuously analyze and records as many as six components of a mixture of gases. IMMEDIATE RESULTS. It makes possible substantial savings in the operation of kilns, production of inert gases, and in metallurgical, petroleum, and other chemical processes. Single point and multi-point instruments are available for a wide variety of applications.

Send for literature mentioning application

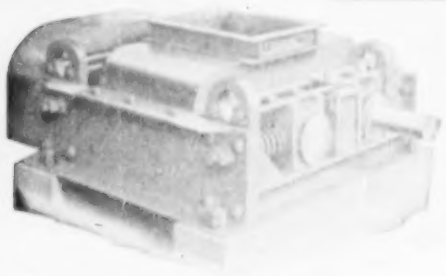
CAMBRIDGE
INSTRUMENT COMPANY, Inc.

3710 Grand Central Terminal, New York 17, N. Y.

Pioneer Manufacturers of

PRECISION INSTRUMENTS

IEN-3239



DOUBLE ROLL CRUSHERS

Illustrated and described in Bulletin No. 7041 are our answer to your question: "I have something to reduce—what will it do?" Whether it's material on your Jeffrey Double Roll Crusher will vary as the work. They are ideally suited for reducing a wide variety of materials—coal, coke, limestone, shale, etc. Any lump based from 10" and larger. A minimum of fines. If "coarse" may be desired that question exists!

JEFFREY

THE JEFFREY MANUFACTURING CO.
914 Fourth Street, Columbus 16, Ohio

IEN-3240

ALLIS-CHALMERS, MIRA, 225 W. 17
MILWAUKEE, WIS.

ALLIS-CHALMERS

IEN-3241

PRESS TOOLS . . Strip stock cradle minimizes manual handling at a press

Source: U. S. TOOL CO.
268 N. 18th St., East Orange, N. J.

IEN-3242

CLEANING . . Hand cream removes dirt, paint, ink, tar, glue

Source: FAIRFAX CHEMICAL CO.
4508-7 Olive St., St. Louis 8, Mo.

Packaged in tubes to 10 pound cans

IEN-3243

FASTENING . . Blind hollow rivet in six sizes from 3/16 to 1/2 inch

Source: CHERRY RIVET CO.
229-33 Winston St., Los Angeles 13, Calif.

IEN-3244

FOR HANDLING HIGH TEMPERATURE AND HIGHLY VOLATILE LIQUIDS

Motor Driven APCO Two Stage, Water Jacketed, Turbine-Type Pump with Flange Connections.

SINGLE AND TWO STAGE

•

3500 R.P.M.

•

WIDE RANGE OF SIZES

•

FOR SCREW OR FLANGE CONNECTIONS

Write for BULLETIN 111-WJ

AURORA CENTRIFUGAL PUMPS

DISTRIBUTORS IN PRINCIPAL CITIES

AURORA PUMP COMPANY

AURORA always PUMPS

102 LOUCKS STREET, AURORA, ILLINOIS

IEN-3245

. . . AND READY FOR HEAVY DUTY

For the utmost in performance, safety and long life, specify Wickwire Rope. Available in all sizes and constructions in both regular lay and WISSCOLAY Preformed.

Write now for your free copy of "Know Your Ropes." Contains 82 pages of suggestions on selection, application and usage of Wire Rope. Write Wire Rope Sales Office, Wickwire Spencer Steel Pulmer Moss

WICKWIRE ROPE

PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL & IRON CORP.

Wire Rope Sales Office & Plant
Executive Office

BRANCHES & DISTRIBUTORS IN KEY CITIES EVERYWHERE

CF&I SUBSIDIARIES

IEN-3246

Well-Known Processor

Puts 37% More Thru Cookers *with Nicholson STEAM TRAPS*

A leading food manufacturer found that a recent Nicholson installation of a Type [illegible] Steam Trap in a mechanical type [illegible] that their production was increased 37%. Reason for Nicholson's better heat transfer operation was found between [illegible] Differential. It is a long, average discharge capacity maximum accuracy.

5 Types for Every Plant Application

CATALOG 448
in the Sweet's

W. H. NICHOLSON & CO.

IEN-3247

Look to

VIKING

To Help You With Your

PUMPING PROBLEMS

Fig. 51

Do you have a question concerning the type of pump needed and how best to install it for greatest efficiency? Viking is equipped to give you this information and to make recommendations from the most complete line of rotary pumps in the world.

The facilities of Viking are at your disposal for your expansion, new design, replacement or service problems.

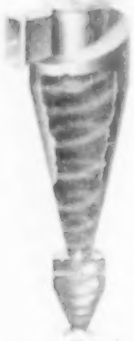
The complete nation-wide sales and service organization is also ready to lend a helping hand. Write today for latest free Folder 555F. There's no obligation, of course.

Viking PUMP COMPANY
Cedar Falls, Iowa

IEN-3248

CONTROLLABLE COLLECTION EFFICIENCY

only with DUCLONE



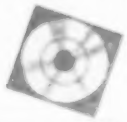
- Because with DUCLONE COLLECTOR [illegible]
- [illegible]
- Because only DUCLONE is equipped with [illegible]
- Sturdily engineered [illegible] simple and durable construction [illegible] heavy duty service.
- A DUCON engineer will gladly consult with you on any dust problem.

Write for descriptive, illustrated catalog DC55.

The DUCON Co.
MINEOLA, N. Y.

IEN-3249

FUEL AND LABOR SAVINGS — We believe the installation of the York Shipley Fire Tube Boiler has contributed to the high efficiency of our bottling plant. The burning of fuel and the saving in labor is quite substantial. Our boiler is fired by a stoker which we have found very economical and reliable. Operating with a steam pressure of 100 lbs. we are able to supply steam for our bottling operations, heating, etc. We are very pleased with our York Shipley Boiler.



SUBSTANTIAL SAVINGS

result from

- [illegible]
- [illegible]
- [illegible]

PLUS [illegible] shutter

[illegible]

YORK SHIPLEY
416 JESSOP PLACE • YORK, PA. • PHONE [illegible]

IEN-3251

PUMP . . Centrifugal design, made of Illium for corrosive liquids

Source: BURGESS-PARR CO.
Illium St. Freeport, Ill.

Rating [illegible]

IEN-3252

INSULATING . . Inorganic sheet, 3 to 15 mils, for electrical uses

Source: JOHNS-MANVILLE SALES CORP.
22 E. 40th St. Room 1701 New York 16, N. Y.

[illegible]

Sample and data in 16 page folder

Quotations Type: [illegible]

[illegible]

The material [illegible]

IEN-3253

DRILLING . . Center drill seats work on narrow band on center

Source: LINK INDUSTRIES
13336-42 Elmira Ave. Detroit 27, Mich.

Covered [illegible]

[illegible]

IEN-3255

REDUCE HANDLING

of Tools, Parts and Materials

STACKBINS [illegible]

STACKRACKS [illegible]

STACKBINS
IN
STACKRACKS

[illegible]

STACKBIN SYSTEM
"Stacked and Still Accessible"

IEN-3256

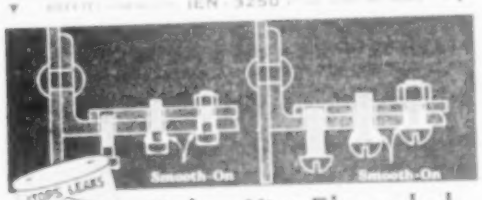
Jacketed Pipe and Fittings

NOW AVAILABLE IN SPECIAL METALS FOR HANDLING CORROSIVE MATERIALS

How H-B Jacketed Pipe and Fittings which have been used for years in processing [illegible] are now available [illegible] and lead and in stainless steel required for handling corrosive materials. In any processing operation where the maintenance of a uniform temperature in the process paper is essential, an H-B Jacketed Pipe System will assure dependable, economical processing. We welcome inquiries on the handling of acids, corrosives or [illegible] materials. Illustrated Bulletin [illegible] will be sent on request.

HETHERINGTON & BERNER INC.
[illegible] KENTUCKY AVENUE • INDIANAPOLIS 7, INDIANA

IEN-3250



STOPS LEAKS SMOOTH-ON No. 1 SEALANTS 1900

Holes Not Threaded- But Bolts *Hold*

While Smooth-On No. 1 Iron Cement you can make holes, [illegible] Smooth-On [illegible] of [illegible] Water. You save time and cost. Have repairs. And the parts are [illegible] Smooth-On [illegible] parts shapes [illegible] cracked castings, [illegible] condensers, etc. [illegible] leaks in pipe lines [illegible] Tighten [illegible] parts and [illegible] Use Smooth-On No. 1 [illegible] Smooth-On [illegible] supply [illegible] repair [illegible]

FREE REPAIR HANDBOOK

[illegible] Write for Vol. 8 [illegible]

Smooth-On Mfg. Co., Dept. 1
[illegible] Ave., Jersey City 6, N. J.

Do it with SMOOTH-ON
THE IRON CEMENT OF 1000 USES

IEN-3254

PAGE FENCE *-Since 1883*

• AMERICA'S FIRST WIRE FENCE •

There's one "*Best*" for You

• [illegible] Page Fence [illegible] Write to PAGE FENCE ASSOCIATION [illegible] Atlanta, Birmingham, Chicago, Dallas, Detroit, Los Angeles, Philadelphia, Pittsburgh, New York [illegible]

PRODUCT OF [illegible] A WIRE DIVISION OF AMERICAN FENCE & TUBE COMPANY, INC.

IEN-3257

LOOK to FRASSE

for Stainless Pipe and Tubing

WHEREVER [illegible] Frasse handles [illegible] Whenever you need for [illegible] pipe, valves, fittings [illegible] off the shelf.

Frasse [illegible] Tubing, seamless and welded [illegible] in square [illegible] Pipe [illegible] and [illegible] Full range of sizes in all products. [illegible] among [illegible]

Check Frasse [illegible] stainless pipe and tube [illegible] 24 pages of [illegible] Write Frasse & Associates Co., Inc. [illegible] New York, N. Y. • Philadelphia • Buffalo • [illegible]

FRASSE *for* STAINLESS PIPE and TUBING VALVES and FITTINGS

▼ DATA SHEET—Issued by IEN-3258 ▼

▼ DATA SHEET—Issued by IEN-3259 ▼

VISIT OUR BOOTH 951 A. S. T. E. SHOW

HAPCO HY-AIR PRODUCTS CO.

▼ DATA SHEET—Issued by IEN-3260 ▼

Here's what to look for in Unit Heaters

MODINE UNIT HEATERS

▼ DATA SHEET—Issued by IEN-3261 ▼

PUMP . . Gear type, stainless steel, for corrosive liquid transfer service

Source: ERTEL ENGINEERING CORP.
16-20 Front St., Kingston, N. Y.

▼ DATA SHEET—Issued by IEN-3262 ▼

TESTING . . Moistureproof electrodes for pH meter, color coded for range

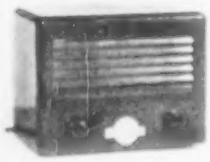
Source: LEEDS & NORTHRUP CO.
4934 Stenton Ave., Philadelphia 44, Pa.

Good for use in automatic control

▼ DATA SHEET—Issued by IEN-3263 ▼

COMMUNICATING . . Talk-listen units plug into 110-volt lighting circuit

Source: VOCALINE CO. OF AMERICA INC.
50 Industrial St., Old Saybrook, Conn.



▼ DATA SHEET—Issued by IEN-3265 ▼

Garlock GASKET CUTTER

THE GARLOCK PACKING COMPANY
PALMYRA, NEW YORK

GARLOCK

▼ DATA SHEET—Issued by IEN-3266 ▼

At Last ·

A NEW ALL-STEEL FABRICATED PRECISION-BUILT RADIAL DRILL TABLE

DIMENSIONS:
24" Long
18" Wide
18" High
Side Leaf 12" by 24"
5/8" T Slots
Weight 408 lbs.
Top surface accurately machined for true parallel.

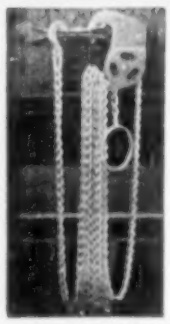
A real rugged table for all radial drills with 3 to 12-ft. arms. Attached to any base with hold-down clamps. Only $160.00 F.O.B. Peoria, Illinois.

IMMEDIATE DELIVERY

ILLINOIS MACHINERY CO.
3019 S. Adams Street Peoria, Illinois

▼ DATA SHEET—Issued by IEN-3264 ▼

Opening Box Car Doors GUARANTEED!



NOLAN ONE MAN CAR DOOR OPENER

THE NOLAN COMPANY, 114 Pennsylvania St., Bowerston, Ohio

▼ DATA SHEET—Issued by IEN-3267 ▼

Joint Connections made with Engineered Clamps and Couplings

Source: MARMAN Products Co., Inc.
940 W. Florence Ave., Inglewood, Calif.

Write for catalog or information on "joint problems"

Dept. 1-4

MARMAN PRODUCTS CO. INC.
940 W. FLORENCE AVE., INGLEWOOD, CALIF.

▼ BASSICK—Identify by IEN-3268 if you write the maker ▼

NOW!

6, 8, 10, and 12 in. Sizes

Weight of wheels cut 50% *with no cut in strength!*

New Bassick "Alcore" industrial wheels cost less, too!

Power-saving rubber treads on high-strength aluminum alloy cores. 6, 8, 10 and 12 in. sizes. Write for price and specification sheet to the world's largest manufacturer of casters—THE BASSICK COMPANY, Bridgeport 2, Conn. Division of Stewart Warner Corp. In Canada: Bassick Division, Stewart Warner Alemite Corp., Ltd., Belleville, Ont.

Bassick MAKING MORE KINDS OF CASTERS . . . MAKING CASTERS DO MORE

▼ BASSICK—Identify by IEN-3269 if you write the maker ▼

pretty trim, trims costs 10¢ a wheel

it's done with mirror like **CMP** *bright annealed stainless strip*

THINSTEEL

Savings of approximately 10¢ on each steering wheel means thousands of dollars to this important manufacturer. And CMP bright annealed stainless makes it possible. Using a true stainless type 302 in .010" thickness, both left and right trim pieces are fabricated from identical blanks—surface brightness and luster being uniform on either side of the strip. Buffing or polishing of the formed parts has been eliminated. The highly lustrous finish on the annealed chrome-nickel strip in the as-supplied condition is not destroyed during the fabricating operations.

Perhaps you could profit, too, with CMP's bright annealed 0.10 gauge 18-8 stainless strip. May we send you a sample or arrange for a Thinsteel [illegible] for you?

THINSTEEL FACTS

Extra-Long Coils

Extremely Close Tolerances

Wide Range of Physicals and Analyses

Gauges as Thin as .001"

CMP THINSTEEL

PROGRESS COLD ROLLED C·M·P STAMP STEEL

the **C**old **M**etal **P**roducts co.
YOUNGSTOWN 1, OHIO

NEW YORK • CHICAGO • DETROIT • INDIANAPOLIS
LOS ANGELES • ST. LOUIS

▼ BASSICK—Identify by IEN-3270 if you write the maker ▼

BATTERY CHARGING . . Rectifier wheel mounted for railroad batteries

Source: THER ELECTRIC & MACHINE WORKS
11 S. Jefferson St., Chicago 6, Ill.

New fan-cooled [illegible] consists of a bank of [illegible] selenium rectifier stacks, a 3-phase induction transformer and three automatic contactors. The assembly is wheel mounted and has a power or manual control, a 3-phase 4-pole disconnecting switch and two fit-snap [illegible]. A rear protective [illegible] overcharge or over-heating.

The truck mounting [illegible] the weight of the assembly to hold the trolley in set position. Moving the assembly forward or backward [illegible] the trolley, because the brakes [illegible] on the drawer and wheel tolerance and 19 to 20 inch BD with [illegible] wheels [illegible].

▼ BASSICK—Identify by IEN-3271 if you write the maker ▼

DRILLING . . Carbide center drill will cut new center in hardened tool

Source: NATIONAL TOOL SALVAGE CO.
6509-13 Epworth Blvd., Detroit 10, Mich.

Body diameter [illegible] and .500 in. [illegible] this new carbide center drill for drilling for hardened steel. Tip diameters are [illegible] Price [illegible] for big tools. Overall length is [illegible] in. [illegible] price is $10.00 for the small tool, $19.50 for the larger size. The tool will drill [illegible] on the [illegible] as an example of [illegible].

▼ BASSICK—Identify by IEN-3272 if you write the maker ▼

ELECTRIC CABLE . . Neoprene covered 1 to 8 conductors, for severe service

Source: WESTERN INSULATED WIRE CO.
1003 E. 62nd St., Los Angeles 1, Calif.

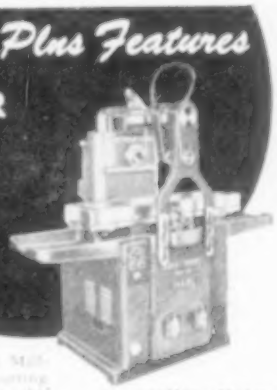
Bronco 60 Neoprene Covered [illegible] electric cable is [illegible] for [illegible] guarantees not more than 50 per cent by weight of neoprene. At the socket, Chlorosulfonated Polyethylene is laying to attack by oil even when [illegible] Flame, abrasion and [illegible] of strength to [illegible]. The line is [illegible] with [illegible] conductors. Types OS, W and O have [illegible] [illegible] Type [illegible], [illegible] and [illegible]. Consult electric [illegible].

All Makers of These and All Other Products Are Listed in THOMAS' REGISTER — Descriptions — Ratings — See Page 58

▼ BASSICK—Identify by IEN-3273 if you write the maker ▼

KENT-OWENS *Plus Features*

CUT YOUR MILLING COSTS!



You'll find Kent-Owens Milling Machines the cost-cutting answer for tough milling jobs! They're rugged, simple, efficient . . . with practical features that reduce machining time . . . save labor . . . and maintain high precision. For example—fast foot feed actuating lever eliminates everything and nothing action . . . wide range of automatic cycle controls [illegible] . . . easy two-point contacts make it easier provides smoothly simple and direct drive. Write for bulletins on wide range of hydraulic and hand operated machines. Kent-Owens Machine Co., Toledo, Ohio.

See KO Milling Machine Exhibit [illegible] Cleveland, O.

KENT-OWENS
Milling Machines

▼ BASSICK—Identify by IEN-3274 if you write the maker ▼

EVERY ENGINEER will want a copy of this BULLETIN

[illegible] way to get the right power. For [illegible] the most [illegible] the [illegible] new hard-hitting [illegible] on PNEUMATIC CYLINDERS. 48 pages of helpful specification and engineering [illegible] complete with diagrams and dimensions. The handbook [illegible] a complete [illegible] diameters [illegible] 12 in. [illegible] are shown [illegible] standard mounting styles [illegible] mounting and double end rod [illegible] available with adjustable cushions [illegible] 2-8. Write for Bulletin 2-8.

HANNIFIN CORPORATION
1101 S. Kilbourn Ave., Chicago 24, Ill.

▼ BASSICK—Identify by IEN-3275 if you write the maker ▼

TRY IT FREE!
TODAY'S BIG BUY IN CLEANERS

the *All-Purpose* **IDEAL** "tank type" cleaner

For general vacuum cleaning—water pick-up—scrap collection

[illegible] IDEAL Hand Type Cleaner. BLOW—VACUUM—SPRAY [illegible] 2, 3 and 5 HP models.

Sold through America's Leading Distributors

MAIL COUPON TODAY FOR FREE DEMONSTRATION IN YOUR OWN PLANT

IDEAL INDUSTRIES, Inc.
1108 Park Ave., Sycamore, Ill.

Arrange FREE demonstration of the IDEAL Tank Type Cleaner in our plant.

NAME

COMPANY

CITY ZONE STATE

▼ BASSICK—Identify by IEN-3276 if you write the maker ▼

PYLE-NATIONAL INDUSTRIAL LIGHTING FIXTURES

for safety IN HAZARDOUS LOCATIONS

EXPLOSION PROOF

Pyle-National H Series, Class I, Groups C and D

[illegible] Industrial Lighting Fixtures and accessories [illegible] Explosion Proof, Dust-Tight and Weather-Proof [illegible] Industrial Lighting Fixtures [illegible] Pyle-National [illegible] Lighting Fixtures [illegible] Industrial Lighting Fixtures [illegible] Industrial Lighting Fixtures [illegible] Industrial

REFITT—Identify by IEN-3277 if you write the maker

modern design for modern sanitation

LP-20
Available in Black or White

OPEN FRONT AND BACK DESIGN . . . means quicker, easier cleaning. Cuts upkeep to a minimum. No germ-collecting crevices, always sanitary.

SELF-RAISING . . . Seat remains upright when not in use with bowl serving as urinal. Seat stays clean and dry.

SOLID PLASTIC . . . Shatter-proof, fire-proof. Plastic covered hinge is dirt free, moisture proof. Assures long life, low maintenance.

WRITE NOW for full details on Model LP-10 (illus.), Model LP-40 with self-raising hinge, and a complete line of conventional models.

DEPT. IE

SPERZEL
123 14th Avenue South
Minneapolis, Minnesota

All Sperzel Seats Fit Standard Bowls

REFITT—Identify by IEN-3278 if you write the maker

The DRY SCRUBBER with the *Self-Sharpening* BRUSH FEATURE

Just flip the switch! That reverses the motion of the brushes of the *Finnell* Dry Scrubber and re-sharpens them automatically. Eliminates the need for frequent changing of brushes by hand in order to maintain a good cutting edge. This heavy duty *Finnell* cleans grease-caked floors in about one-tenth the man-hour time required when hand-scrubbing, and is far more thorough. Floating brush rings enable the two powerful scarifying brushes to get into indentations and grooves that rigid coupling brushes pass over and miss. The machine is adaptable to wet scrubbing, steel wooling, waxing and polishing. For free [illegible] demonstration in facilities, phone or write Finnell Branch or Finnell Corpn. Inc. [illegible] Indiana.

FINNELL SYSTEM, INC.
Pioneers and Specialists in
FLOOR-MAINTENANCE EQUIPMENT AND SUPPLIES
BRANCHES IN ALL PRINCIPAL CITIES

REFITT—Identify by IEN-3279 if you write the maker

Gears . . . to meet your most exacting specifications

Fine Gears
Made to Order

[illegible]

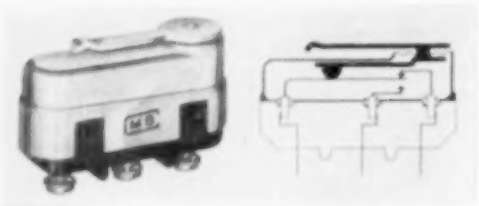
FAIRFIELD MANUFACTURING COMPANY
215 S. Earl Avenue Lafayette, Indiana

FAIRFIELD *GEARS*

REFITT—Identify by IEN-3280 if you write the maker

SWITCH . . Sensitive snap acting, is sealed in gas filled metal housing

Source: MICRO SWITCH CORP.
30 E. Spring St., Freeport, Ill.



External changes in pressure or temperature and acting plunger that are corrosive or moisture filled will not affect the operation of this new No. 1091 assembly in the company's line of sensitive snap-acting switches. The switch mechanism is sealed in a gas-filled metal housing so there is no internal moisture to withdraw or corrode and interfere with operation.

Connections are brought out through insulating glass hermetic connectors to No. 6 screw terminals in the plastic base on which the metal cap is mounted. Change in external pressure is compensated by the Wilkerson bellows for the operating finger. Overall dimensions, approximately 2 by ⅝ by 1½ in., permit interchange with standard Type-A Fig. plunger basic switch.

Contact rating is 25 amp. on 28-volt dc resistive load, 10 amp. on an inductive unit. Operating force is about 10 ounces. Release force is 4 ounces. Movement differential is .020 maximum with pretravel to .045 inch. Overtravel is .01 in. and overall travel distance is .096 in., here minimum. The switch design is single pole, double-throw.

REFITT—Identify by IEN-3281 if you write the maker

MIXING . . Air operated machine for batches of inflammable materials

Source: UNION TOOL CORP.
49 Thomas St., Warsaw 11, Ind.

Model M-10 with 10 gal. working capacity and Model M-20 rating 20 gal. are new in the company's line of mixing equipment. Both are driven by double-acting cylinders that impart an oscillating movement to the removable mixer paddle. The housing is fitted with a removable cover that permits application of air pressure above a batch of material to expel it through the delivery line from the bottom. The discharge can be carried out without stopping the paddle for materials that tend to settle in the tank.

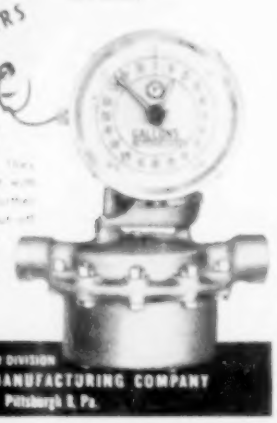
The two sizes have inside tank diameters measuring 15½ and 19½ inches. Outside diameter is dependent on choice of plain or jacketed construction either of which can be specified. Inside tank depth is 20 inches. Overall height is 40 and 39 inches. Weights in plain construction are 215 and 265 pounds. The pneumatic cylinder operates on 30 to 125-lb. pressure. Speed range is 90 oscillations per min. on 50 lb. through a fulcrum ¼ in. line.

All Makers of These and All Other Products Are Listed in THOMAS' REGISTER — Descriptions — Ratings — See Page 50

REFITT—Identify by IEN-3282 if you write the maker

BATCH MIXING MADE . . . *Simple Safe Sure!*

with **EMPIRE** INDUSTRIAL METERS

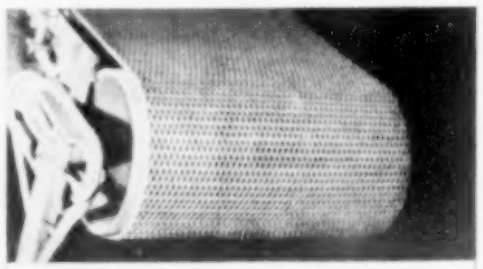


Empire meters are efficient tools for the chemical, food, drug and process industries. They provide exact measurement with the turn of a valve. As a further convenience, automatic shut-off controls are available in some sizes. Several types of regulators can be furnished. Sizes ⅜" to 3".

Ask for Bulletin 621

PITTSBURGH EQUITABLE METER DIVISION
ROCKWELL MANUFACTURING COMPANY
Pittsburgh 8, Pa.

REFITT—Identify by IEN-3283 if you write the maker



Foods and Forgings RIDE SAFELY ON WISSCO BELTS

Whether your conveyor belt problem involves freezing or broiling temperatures, light or heavy loads, resistance to abrasion or corrosion, custom-engineered Wissco Belts will give long, dependable service.

Wissco Belts are the accepted standard for heat treating of metals, glass and ceramic ware, and for processing of foods and other products.

Write for our catalog showing Wissco Belts, their use and application.

WISSCO METAL CONVEYOR BELTS
A PRODUCT OF WICKWIRE SPENCER STEEL DIVISION OF THE COLORADO FUEL AND IRON CORPORATION

Sales Office and Plant — [illegible]
Executive Office — [illegible]
Sales Offices — [illegible]
Pacific Coast — [illegible]

REFITT—Identify by IEN-3284 if you write the maker

For heating ordinary compounds, you will find the proper compound melter or dispenser in the standard Sta-Warm line. Sizes from 1 pint to 100 gal. available for prompt delivery. Wide variety of types, voltages, controls and accessories to suit. Typical models shown below.

For solving special compound melting and handling problems, let the STA-WARM DATA SHEET organize salient factors affecting output, capacity, application. Then ask for Sta-Warm Engineering Service.

WRITE FOR *Sta Warm* DATA SHEET and QUESTIONNAIRE

Sta-Warm ELECTRIC CO.
560 N. CHESTNUT ST. • RAVENNA, OHIO

REFITT—Identify by IEN-3285 if you write the maker

FREE SAMPLE

STRACO
photo copy paper
TRY IT in your machine

SAVE 10 to 40%

• • • •

HERE'S WHY:

Our low distribution costs and quantity discounts make possible this offer of a substantial saving in your photo-copy paper costs. Try a free sample or send a test order on a money-back basis. State your size and specifications, regular or light weight (25%), rag paper for permanent files. All standard sizes and rolls.

TYPICAL PRICES (Delivered)	100 sheets	500 sheets
8½ by 11	$3.50	$15.00
11 by 17	7.00	31.75
22 by 34	28.00	130.00

Ask for complete price list

STRACO
STRAIGHT DRY PLATE CO.
245 Hopkins Avenue Jamestown, N. Y.
More than 40 years making special photopapers

▼ REPRINT—Identify by IEN-3286 if you write the maker ▼

W-A-B Controls are a proven means of performing a wide variety of functions from a simple "push-pull" operation to precise positioning. Successfully serving on production machines, hoists, cranes, excavating equipment, on drilling rigs, boats, etc. Illustrations show only a few of the many devices available. Ask for Bulletin 9401 for full details.

Westinghouse Air Brake Co.

Industrial Division, Wilmerding, Pa.

DISTRIBUTORS THROUGHOUT THE UNITED STATES
CONSULT YOUR CLASSIFIED DIRECTORY

▼ REPRINT—Identify by IEN-3287 if you write the maker ▼

2 Lives for Your Electric Drives

THEY WILL
SLASH MAINTENANCE!
MULTIPLY PRODUCT SALES!
INCREASE ON-THE-JOB TIME!

For more information about these NEW and better PARTS that LAST TWICE AS LONG as the old type, write to Apparatus Dept., General Electric Co., Schenectady 5, N. Y.

GENERAL ELECTRIC

700-105

▼ REPRINT—Identify by IEN-3289 if you write the maker ▼

PRESS . . Hydraulic machine for force fitting has 150 ton rating

Source: HANNIFIN CORP.
1108 S. Kilbourn Ave., Chicago 24, Ill.

Control for the movement of the ram press and for press movement is by two switches or a single lever which actuates the operator's Industrial Pressure Control. Range is from 15 to the maximum 150 ton. The press has been built particularly for Rewind applications, as in assembling shafts to stock. It is self-contained with its own motor-driven hydraulic power unit.

Speed for the 48-in. travel with stroke is max. of 257 ipm. Daylight measures 36 inches. Width between columns is 30 in. and measure on the bed front to back is 36 inches. The bed has a 10-in. center concentric hole and a hole 18 in. above the bed.

▼ REPRINT—Identify by IEN-3290 if you write the maker ▼

DRILLING . . Steel work table for use with radial drilling machine

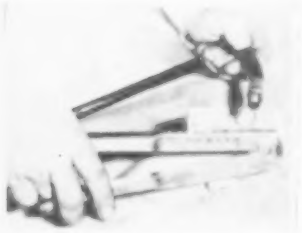
Source: ILLINOIS MACHINERY CO.
3050 S. Adams St., Peoria, Ill.

List price is $190 for this new 24 by 18 by 10½ fabricated steel table. It mounts on compact side face measuring 21 by 12 inches. The T-slots are ⅝ inch. Weight is 400 pounds. The table is secured in place on a machine base by standard bolt-down clamps. Three of the faces are machined for true parallel.

▼ REPRINT—Identify by IEN-3291 if you write the maker ▼

PLIER . . To crimp ferrules in place on hose end, ½ to 1½ in.

Source: A. SCHRADER'S SON DIV.
468-72 Vanderbilt Ave., Brooklyn 17, N. Y.



New plier mounts two strands of multiple wire to form a loop on one jaw. An anchor fitting at the end of the loop permits adjustment for diameter from ¼ to 1½ inches. The loop is opened to insert a hose with a ferrule in place by squeezing the plier. The ferrule will be crimped on the hose when the plier is used to contract the loop.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 80

▼ REPRINT—Identify by IEN-3292 if you write the maker ▼

▼ REPRINT—Identify by IEN-3293 if you write the maker ▼

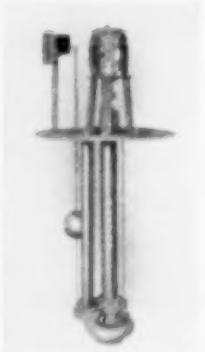
THE MERCURY MANUFACTURING CO.

▼ REPRINT—Identify by IEN-3294 if you write the maker ▼

▼ REPRINT—Identify by IEN-3295 if you write the maker ▼

▼ REPRINT—Identify by IEN-3296 if you write the maker ▼

For Dependable Heavy Duty Sump and Drainage Service



This rugged, heavy duty sump pump gives exceptional service in removing water from boiler room pits, pipe tunnels, elevator pits, cellars, basements. It is also widely used for similar service where automatic control of liquid levels in vats or tanks is required.

CAPACITIES Fig. 1047 is available in four sizes for pit depths from 3 to 20 feet. Capacities from 10 to 100 G.P.M. with heads up to 130 feet depending upon capacity.

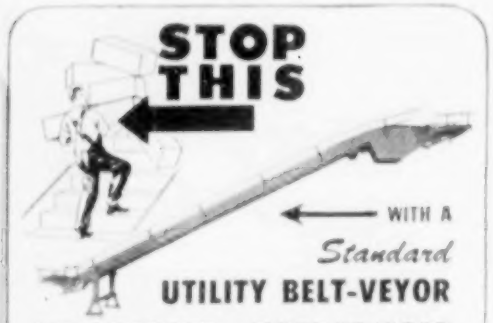
Source without dell (Fig. 1047)

ADVANTAGES The unit comes complete with float, automatic switch and cover plate. The discharge pipe, pump support collar and the cover plate are welded into a rigid unit assuring permanent alignment of upper and lower bearings. Lower bearing is provided by special pressure equalizing system to give long wear.

For complete information call or write Pump Headquarters or your nearest Goulds dealer. Ask for Bulletin 726.1.

Goulds PUMPS INC. Seneca Falls New York

▼ REPRINT—Identify by IEN-3297 if you write the maker ▼



LIFT OR LOWER—FLOOR TO FLOOR OR CONVEY HORIZONTALLY

Move boxes — cartons — crates — sacks and bundles from basement to first floor, or any floor to floor, or convey in a straight line — continuously with the Standard UTILITY BELT-VEYOR. A compact, pre-engineered unit, easy to install. Lower existing stairways where practical) handles commodities up to 150 lbs. — available in 4 belt widths — 16, 24, 30 and 24 inch — and equipped with adjustable guard rails to facilitate handling packages wider than belt. Hand or motor operated. Write for Bulletin IEN-40.

Standard Conveyor Company North St. Paul Minnesota

Sale and Service in Principal Cities

Standard HEAVY DUTY & POWER CONVEYORS

▼ REPRINT—Identify by IEN-3298 if you write the maker ▼

NEW! TORQUE-ARM SPEED REDUCER

SPECIFICATIONS of the new Torque-Arm Speed Reducer, which is a product of the Dodge Manufacturing Corporation, Mishawaka, Ind., are contained in a new 4-page bulletin. Write "Torque-Arm Speed Reducer" on your letterhead and mail to Dodge Manufacturing Corporation, 600 Beloit Street, Mishawaka, Ind.

DODGE MANUFACTURING CORPORATION 600 Beloit Street, Mishawaka, Ind.

DODGE

of Mishawaka, Ind.

▼ REPRINT—Identify by IEN-3299 if you write the maker ▼

SHAPING . . Grooving machine cuts internal and external oil grooves

Source: WICACO MACHINE CORP. 4806 Stenton Ave., Philadelphia 44, Pa.

New design of the company's [illegible] machine for grooving [illegible] cuts oil grooves, balls with another units, [illegible] measuring ¼ to 4½ in. in diameter. It will cut as big as [illegible] in depth, to a maximum [illegible] in width and be adjustable in [illegible] width increments of [illegible] in. to a maximum of [illegible] inches. Work with grooves wider than 2 in. can be machined by reversing it and making a second cut. The machine can be employed also to cut external grooves in shafts and rectangle grooving [illegible] surfaces on the work to lock in the chuck.

Work to 4½ in. in outside diameter is held in a 3-jaw chuck whose swing pieces are mounted on a faceplate. Half bearings are secured to a pneumatic vise. A special screw-feed fixture holds pieces to be shaped or for machining in elliptical holes. An index fixture is employed when two grooves are to be opposite each other or at an included angle. Change gears are used for various shapes of grooves such as right or left hand spiral. From 1 to 8 revolutions per stroke are possible.

A feature of the operation is that the operator can load and unload the machine without stopping it and modified other jobs have and as many as 300 finished pieces per hour. Engineering details are included in new 4-page bulletin, "Wicaco Grooving Machines."

▼ REPRINT—Identify by IEN-3300 if you write the maker ▼

CRANE . . Crawler mounted assembly has 7½ ton nominal load rating

Source: WAYNE CRANE DIVISION 2511-13 Taylor St., Fort Wayne 1, Ind.

Model 66 is a self-utility mobile crane with mounting on 8½ ft. crawler treads spanning 8 ft. in width. Drive is by a 62 hp. gasoline engine operating at 1,800 rpm. A diesel engine can be specified. The crane can be converted to handle a magnet, clam, dragline, clamshell bucket, shovel or trench hoe.

Construction includes a weather-proof cab designed for ready access to the deck machinery, a worm-driven or five boom hoist, built-in counterweight, 15-in. drums, anti-friction bearings for the rotating shafts, mounting on a base plate on a 48-in. ball bearing. The controls permit simultaneous or independent travel, lift, boom and swing movements. Swing speed is about 8 rpm.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . Descriptions . . Ratings . . See Page 34

▼ REPRINT—Identify by IEN-3301 if you write the maker ▼

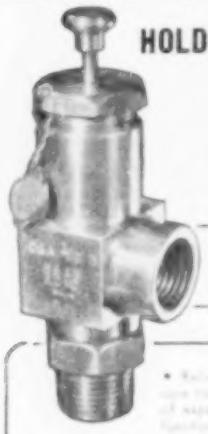
Fast, Clean Handling of Lubricants with ARO

A complete line for your needs in specialized lubrication—any type of machinery or equipment. Each Aro unit expertly engineered . . . assures fast, clean handling of lubricants from drum to fitting . . . positive lubrication . . . with less labor, less waste, lower cost! See your Aro Jobber or write . . . The Aro Equipment Corp., Bryan, Ohio.

ARO LUBRICATING EQUIPMENT

▼ REPRINT—Identify by IEN-3302 if you write the maker ▼

Even after repeated "popping" . . .



HOLDS REFRIGERANT WITHOUT LEAKING

the new B.S.&B Refrigerant Relief Valve

• Relieves refrigeration systems from excessive pressure . . . seals tightly to prevent loss of expensive refrigerant. Even after it has functioned repeatedly, no trace of leakage is evident.

The B.S.&B Refrigerant Relief Valve is a top-quality product . . . engineered to close tolerances, precise in its action. Functions properly with SAFETY HEAD rupture device on outlet (see ASME Unfired Pressure Vessel Code, Par. U-68). Furnished with ¼, ⅜ and ½ inch pipe thread inlet. Available now in any quantity. Write TODAY for full details.

BLACK, SIVALLS & BRYSON, INC. Section A-1459

720 DELAWARE KANSAS CITY 6, MO

▼ REPRINT—Identify by IEN-3303 if you write the maker ▼

B.F.Goodrich

T&W TIRE AND WHEEL ANALYSIS PLAN

•

helps materials handling men cut cost corners

HEAT A FACTOR IN YOUR PLANT? B/G "Oil-Proof" compound is the answer—highly heat-resistant!

No problem is too small . . . nor too large for the T & W analysis man. Ask him in, even though your problems are little ones.

Here's how you can make big savings in tire and wheel costs, equipment maintenance and floor maintenance. An experienced tire and wheel man will survey your operation. He will study loads, hauls, handling equipment, floors and hauling surfaces, and discuss any special problems you may have.

On completion of the survey the B/G man, without charge or obligation on your part, will submit recommendations as to the best type and size tires and wheels for your particular service with information on the longest-wearing compounds and on retreading. He will also provide suggestions on tire care and maintenance.

Send in the coupon below and start the wheels rolling for a B.F.Goodrich industrial tire and wheel expert to visit your plant and make your cost-cutting T & W analysis. You'll find the B/G man is important. He has not "one size fits all" for any one type of tire . . . his company makes and sells ALL types in ALL sizes!

Dealerships Available In a Few Localities—Write B. F. Goodrich, Akron

The B.F.Goodrich Co. Department T&W-[illegible] Akron, Ohio

Please send me additional information on your new Tire and Wheel Analysis plan.

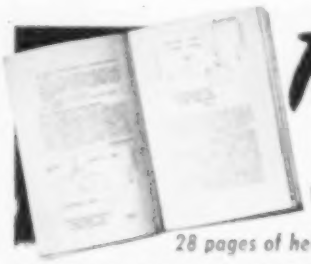
Name _____

Title _____

Company _____

City _____ State _____

▼ BREEFITT—Identify by IEN-3305 if you write the maker ▼



Free!

FROM WESTERN PRECIPITATION

28 pages of helpful facts about

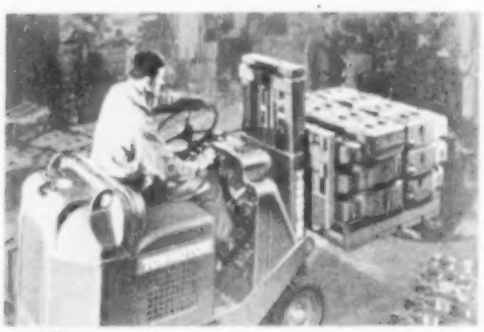
COTTRELL ELECTRICAL PRECIPITATORS

THIS HELPFUL 28 PAGE BOOKLET—prepared by Western Precipitation Corporation, pioneers in the commercial application of COTTRELL Precipitators—summarizes and illustrates many of the basic facts you should know about COTTRELL Precipitators for use in recovering industrial dusts, mists, fogs, fumes, fly ash and other suspensions from gases. Written particularly to answer questions of design engineers, plant engineers and others interested in COTTRELL Precipitators, this booklet outlines the various types available, how they operate, principal types of electrical systems and rectifiers, shell construction, other helpful data.

As long as the supply lasts, a free copy will be sent on request to our nearest office. Write for Bulletin No. C102 today!

WESTERN Precipitation CORPORATION

▼ BREEFITT—Identify by IEN-3306 if you write the maker ▼



Power Plus- for lifting and transporting full capacity loads

With regular hydraulic power for heavy-duty industrial use, with plenty of power, and lifted to order — even for the toughest loads — Towmotor gives 25% to 50% more production, and more jobs. Towmotor's rugged features make every Materials Handling job easier. Write for a copy of "Handling Materials Shortcuts." Towmotor Corporation, Division, Dept. 1120, 1226 E. 152nd St., Cleveland 10, Ohio. Representatives throughout the United States, Canada, Cuba, Puerto Rico, Hawaii and Europe.

every handling job is easier with TOWMOTOR MH!

TOWMOTOR THE ONE-MAN-BAND

FORK LIFT TRUCKS and TRACTORS

▼ BREEFITT—Identify by IEN-3307 if you write the maker ▼

WHALE BRAND SCREW DRIVER

A new design in Screw Drivers that can really "take it" — the blade, shank and shoulder are forged from ONE piece of Tool Steel. When your Repair Shop and Garage Mechanics take one of these sweetly balanced, rugged tools in their hands, they will thereafter—and quickly—Make in a complete line of models and all sizes with square and round blades that run completely through selected hardwood and Pyralin handles. Write for complete details on this fast-moving, long profit line. Ask for the catalog that describes these and other good FORSBERG Tools.

NO SLIP SUPER GRIP

Send for the new Forsberg Catalog! WHALE Brand Screw Drivers, Hack Saw Frames and Blades, Coping Saw Frames and Blades, Band Saws, Breast Drills, Hand Drills.

Forsberg MFG. CO., BRIDGEPORT, CONN., U.S.A.

NEW LITERATURE

Brief reviews to advise you of available new information published by the manufacturers covering products they offer for your use. Identification use of the material, information it contains so you can judge its value to you.

AWARDS — [illegible] IEN-3300

BEARINGS — [illegible] IEN-3301

BEARINGS — [illegible] IEN-3302

BEARING — [illegible] IEN-3303

BOILERS — [illegible] IEN-3304

BORING — [illegible] IEN-3305

BUILDINGS — [illegible] IEN-3306

BURNING — [illegible] IEN-3307

BURNING — [illegible] IEN-3308

CAPACITORS — [illegible] IEN-3309

CHAIN — [illegible] IEN-3310

CIRCUIT BREAKERS — [illegible] IEN-3311

CLAMPS — [illegible] IEN-3312

CLEANING — [illegible] IEN-3313

CLEANING — [illegible] IEN-3314

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 10

▼ BREEFITT—Identify by IEN-3308 if you write the maker ▼

PIPE MARKERS anyone can use— everyone can read

QUIK-LABEL Pipe Markers conform to American Standards Association Pipe Identification System. QUIK-LABELS come on handy ready — stick without moistening. Names of materials printed in large black letters on correct ASA background colors. CAN BE READ UP TO 75 FEET. Markers for over 140 materials, *including all materials listed in ASA Standard A13*, available on Brady Stock Cards. Specials made to your order. QUIK-LABEL Pipe Markers are Spillproof, Fireproof, resist dirt, grease, fumes, moisture — indoors or out. Replace slow and costly painting and hand stenciling. Exclusive Starter-Strip automatically releases part of label for fast peeling. QUIK-LABELS mark your pipes so that anyone who can read will know what's in them. *QUIK-LABELS leave no room for doubt . . . or tragedy.* Write for useful literature and FREE SAMPLES today.

FREE SAMPLES

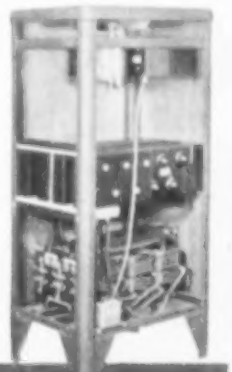
W. H. BRADY COMPANY | Established 1914

Manufacturers of Self-Sticking Tape Products

CHIPPEWA FALLS 9, WISCONSIN • *Distributors in 125 Cities*

▼ BREEFITT—Identify by IEN-3309 if you write the maker ▼

TEN YEARS OF TOP PERFORMANCE . . . 10,000,000 AMPERES



THE UDYLITE-MALLORY RECTOPLATER

[illegible]

THE Udylite CORPORATION DETROIT 11, MICHIGAN

MOTOR GENERATOR SETS • SWITCHES • RECTOPLATERS • RHEOSTATS • PLATING SUPPLIES • FULL AND SEMI-AUTOMATIC PLATING EQUIPMENT • TANKS AND TANK LININGS • PLATING BARRELS • AUTOMATIC POLISHING AND BUFFING MACHINES

▼ BREEFITT—Identify by IEN-3310 if you write the maker ▼

MADISON-KIPP *Die Castings*

The Kipp die casting process offers far cost economies, combined with strength, permanence, lightness and eye appeal in the production of metal parts.

MADISON-KIPP *Lubricators*

Fresh oil by the measured drop, from a Madison-Kipp lubricator, is the most dependable method of lubrication ever developed. It is supplied as original equipment on America's finest machine tools, work engines and compressors.

MADISON-KIPP *Air Grinders*

Kipp Air Grinders give you spectacular off hand grinding. Have high, variable speeds — actually grind — not just rub. They get into small places with small wheels. Every tool maker needs one.

MADISON-KIPP CORPORATION

224 Waubesa Street

MADISON 10, WIS., U. S. A.

▼ BREEFITT—Identify by IEN-3311 if you write the maker ▼

Aeroquip

FLEXIBLE HOSE LINES and DETACHABLE FITTINGS

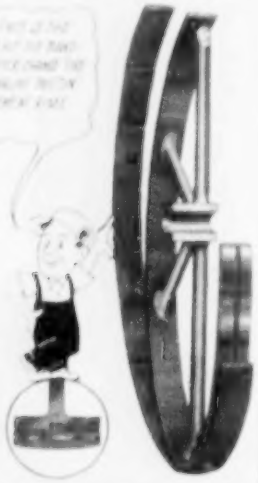
1. Reduce inventory.
2. Reduce expensive downtime.
3. Permit you to salvage old hose lines.
4. Make possible immediate repair of hose line failures.
5. Eliminate the need for factory assembled hose lines.
6. Permit you to make hose lines to desired length as required.
7. Permit you to replace rigid tubing failures on the spot.
8. Eliminate the need for rigid tubing forms and jigs.
9. Permit you to make hose lines fit mock-up installations rapidly.

AEROQUIP CORPORATION
JACKSON, MICHIGAN

RAPIFIT—Identify by IEN-3312 if you write the maker

JIFFY Carter TIRE

Millwright's
The Answer to a Maiden's Prayer



Quite right! The new Jiffy Tires are made to turn to fit any keyway shape. All you do is tap the cover into the tire with a soft mallet. Applied in half-hour. Not simple. Already accepted by American's foremost keyless bushing factories as standard equipment.

OTHER CARTER PRODUCTS

- Guide Line Lights
- Micro Precision Guides
- Rigid Wheels and Quick Change Tires

WRITE TODAY! ... for your free, illustrated folders on any one or all of Carter's outstanding products. Jiffy Tires are available only through the manufacturer of your keyless machines.

"Known on request."

Carter PRODUCTS COMPANY
964 Michigan Trust Bldg., Grand Rapids 2, Mich., U.S.A.

RAPIFIT—Identify by IEN-3313 if you write the maker

ANNOUNCING
Trumbull's new HCI switch

Trumbull's new HCI (High Capacity Interrupter)—Type A Safety Switch has an extremely high momentary current capacity. It withstands heavy short circuits without damage. It was designed for use with modern high capacity distribution systems.

More first-time features

"Circuit breaker" interrupting action breaks heavy loads quickly and safely. ... Cover from operation permits close ganging. ... Front fusing allows compact box, yet gives ample wiring space. ... No exposed live parts when switch is OFF and door is open. ... Clear ON and OFF markings both inside and outside.

HCI switches are available in 30-, 60-, 100-ampere sizes. ... Underwriters' approval throughout. Write for copy of Bulletin TEC-110 today.

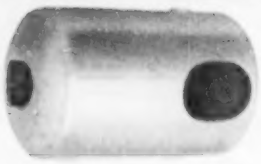
TRUMBULL ELECTRIC

THE TRUMBULL ELECTRIC MANUFACTURING COMPANY
Plainville, Connecticut

TRUMBULL'S TRAINLOAD OF NEW PRODUCTS

RAPIFIT—Identify by IEN-3314 if you write the maker

WHAT METALS CAN BE DEEP-DRAWN?



Numerous metals have been employed in the manufacture of Hackney Deep Drawn shapes and Shells, including steels, stainless steel, Monel metal, aluminum, magnesium, nickel, copper, Everdur, bronze, copper and various alloys.

Pressed Steel Tank Company engineers will be glad to work with you in altering special shapes to fit your packing problems or devising new products to meet full needs.

Hackney PRESSED STEEL TANK COMPANY
Manufacturers of Hackney Products

NEW LITERATURE—Continued

"Facts on literature about a product"

CONDUIT ... Rigid or flexible conduit systems for electrical circuits and accessories, underground sewers, drainage. Folder C-100, 4 pages. Conduit Corp., 3010-18 Gale St., South Gate, Calif. IEN-6081

CONDUIT ... Surface metal raceways and fittings, types, dimensions, connection arrangements. Catalog 16, 132 pages. Wiremold Co., 5 Wiremold Road, Hartford 10, Conn. IEN-6082

CONNECTORS ... For electronic use in plug-in subassemblies. Description, specifications, uses. "Plug-in Components," 16 pages. Alden Products Co., 216-34 N. Main St., Brockton 64, Mass. IEN-6083

CONTACTS ... "Sandback" electrical contacts of silver bonded to steel. Description, dimensions. Bulletin 60, 8 pages. Johnson Electric Co., 6000 Frankstown, Pittsburgh 11, Pa. IEN-6084

CONTROLS ... Electronic overload control for machinery, description, application examples. Bulletin, "Protectrol," 4 pages. Bennett Co., 47 College Highway, Granby, Conn. IEN-6085

CONTROLS ... Electromagnetic remote for acting manipulator, remote control. Diagrams, performance. Bulletin RHCD-3, 8 pages. Bristol Instrument Co., 113-127 E. 40th St., New York 26, N. Y. IEN-6086

CONTROLS ... "Flame-Guard" flame control for oil and gas-fired units; description, schematic. Bulletin F2-C, 4 pages. Wheelco Instruments Co., 842-N W. Harrison, Chicago 7, Ill. IEN-6087

CONVEYING ... Worm wire belts for product conveyor use; details on two types, applications. Bulletin 99, 4 pages. Cambridge Wire Cloth Co., Tiesen Road, Cambridge, Md. IEN-6088

CONVEYING ... Pneumatic equipment to convey a variety of products; schematic installation drawings. Bulletin 103, 12 pages. Conveyor Corp., Twin Bldg., Pittsburgh 14, Pa. IEN-6089

CONVEYING ... Belt and roller conveyors applied to material handling; picture examples. Description folder, 4 pages. Logan Co., 1119-37 Production St., Louisville 6, Ky. IEN-6090

CONVEYING ... Troughing belt conveyor for material handling; various types by sectional construction. Bulletin 102, 4 pages. Robins Conveyors, 270-D Passaic Ave., Passaic, N. J. IEN-6091

CONVEYING ... Stacked belt, roller, wheel conveyor units; description, capacities, prices. Bulletin 48-A, 24 pages. Standard Conveyor Co., 86 Indiana Ave., North St. Paul 8, Minn. IEN-6092

CORROSION PROOFING ... Chemical anodic finishes and multilayer protective coatings. Folder "Anodic Finish," 4 pages. Oakite Products Inc., Box 1210-A, Wilmington 20, Del. IEN-6093

CRANES ... Make HC-H high-speed crane; lifting line, service, mobile, storage. Bulletin 6000, 16 pages. Link-Belt Co., 300 W. N. Michigan, Chicago 1, Ill. IEN-6094

CRANES ... Hand hydraulic crane for truck mounting, 4- to 2-ton capacities; description of use. "Truck Crane," 8 pages. Kelco Equipment Co., 420-22 W. 4th, Chattanooga, Tenn. IEN-6095

CRUSHING ... Dust-proof machines, fine disintegration, wide range capacity. Yellow Bulletin. Bulletin 104, 8 pages. Jeffrey Mfg. Co., 924 N. 4th St., Columbus 16, Ohio. IEN-6096

CRUSHING ... Portable rock and stone feeder crusher screener; specifications. Bulletin 57-A, 20 pages. Pioneer Engineering Works, 1900-17 Central, Minneapolis 13, Minn. IEN-6097

CUTTING ... Fundamentals, hand and lathe operations, boring, cutting, drilling descriptions. Bulletin 104, 8 pages. Rockford Tool Industries, 90 Lyon St., Saginaw, Mich. IEN-6098

CUTTING ... Tool bits, cutting fluids, tool holders, reamers, cutter and grinder. Bulletin KE-AM, 8 pages. Tri-Tor Manufacturing Corp., 4501 N. Southport, Highland, Chicago 13, Ill. IEN-6099

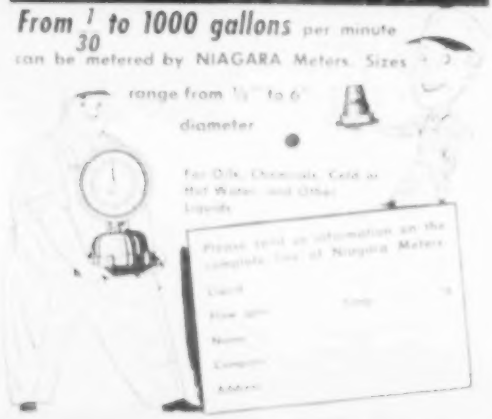
DRAFTING ... Machines, tables, desks, lamps, paper, cloth, print, drafting machines, data automation, business forms, drafting, 108 pages. Fred Ford Co., 3001 N. Avondale Ave., Chicago 18, Ill. IEN-6100

All Makers of These and All Other Products Are Listed in THOMAS' REGISTER ... Descriptions ... Ratings ... *See Page 50*

RAPIFIT—Identify by IEN-3315 if you write the maker

There's a Buffalo NIAGARA METER to Handle Almost Any Volume or Any Type of Liquid:

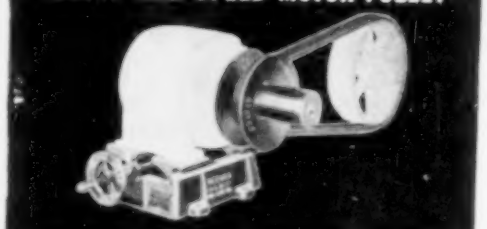
From 1/30 to 1000 gallons per minute can be metered by NIAGARA Meters. Sizes range from 1/4" to 6" diameter



BUFFALO METER CO.
2929 MAIN STREET BUFFALO, N. Y.

RAPIFIT—Identify by IEN-3316 if you write the maker

REEVES VARI-SPEED MOTOR PULLEY



CONVERTS ANY CONSTANT SPEED MOTOR TO A "STEPLESS" VARIABLE SPEED DRIVE!

For Stepless Speed Adjustability Within 6:1 Range. Sizes to 30 Horsepower

Mounts Your Motor on This Reeves Motor Base. Base includes motor, pulleys and mechanism for power transmission and control.

Assembles in One Day. Assembly of Motor Shaft, Consisting of two cone-shaped discs and sliding laterally, and compression spring.

Connects to Driven Machine with Reeves V Belt. Plain V-belt furnishes quiet and smooth power to driven machine.

For complete details, send for FREE Catalog 1951-IN

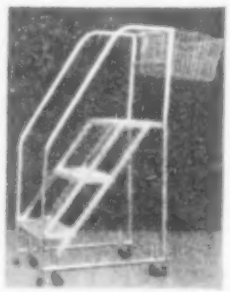
REEVES PULLEY COMPANY · COLUMBUS, INDIANA

Recognized Leader in the Specialized Field of Speed Control Engineering

RAPIFIT—Identify by IEN-3317 if you write the maker

NEW SAFETY STEP-LADDER IS SAFE, CONVENIENT, DURABLE

Casters carry ladder but rubber-tipped legs "lock" to floor when in use.



You can increase storage capacity of floor area, speed stock and pick up operations when Ballymore Safety Step Ladders are used in store and file rooms. Of all steel construction, these ladders are strong, yet easily moved along aisles as casters automatically engage when no one is on the ladder. Danger of the ladder starting to roll when in use is eliminated automatically.

Baskets, which are optional equipment on handrail models, leave both hands free, make possible larger loads, fewer trips. One- and two-step ladders have no handrails, three-step ladders are supplied with or without handrails. Four- and six-step ladders have handrails.

WRITE TODAY FOR FREE ILLUSTRATED CATALOG

THE BALLYMORE COMPANY
9 S. Roberts Road, Bryn Mawr, Pa.

RAPIFIT—Identify by IEN-3318 if you write the maker

Better Coating at Lower Cost with

POTDEVIN Coating Machines

Manufacturers in every field have been depending on their POTDEVINS to cut down operating costs.

Illustrated is Model 2-R for applying any type coating to any kind of material.

POTDEVIN MACHINE CO.
1213 38th St., Brooklyn 18, N. Y.

Designers and manufacturers since 1893 of equipment for Bag Making, Printing, Coating, Gluing and Labeling.

▼ REPRINT—Identify by IEN-3319 if you write the maker ▼

These AO Horsehide Gloves and Mittens Outwear Asbestos on Heat Jobs!

QUICK FACTS

American Optical
SAFETY PRODUCTS DIVISION

▼ REPRINT—Identify by IEN-3320 if you write the maker ▼

TRU-LAY Push-Pull is precision-made. Therefore it . . .

- is positive in action as a steel rod, yet flexible as wire rope
- transmits action over long or short lengths, with few or many bends
- will operate while flexing, with practically no lost motion
- is made in capacities up to 1,000 pounds input
- is designed for long life—a machine part—not a flimsy gadget

MAIL THE COUPON BELOW

ACCO
AUTOMOTIVE AND AIRCRAFT DIVISION
AMERICAN CHAIN & CABLE

Please send me copy of descriptive bulletin DH-87-E-1

Name
Company Name
Address
City Zone State

NEW LITERATURE—Continued

"Note the special 'O' numbers on literature"

DRILLING — [illegible] IEN-0001

DRIVES — [illegible] IEN-0002

DRIVES — [illegible] IEN-0003

DRIVES — [illegible] IEN-0004

DUST COLLECTING — [illegible] IEN-0005

DUST COLLECTING — [illegible] IEN-0006

DUST COLLECTING — [illegible] IEN-0007

ELECTRONIC PRODUCTS — [illegible] IEN-0008

ELECTRONIC PRODUCTS — [illegible] IEN-0009

ENGINEERING — [illegible] IEN-0010

FASTENERS — [illegible] IEN-0011

FASTENERS — [illegible] IEN-0012

FASTENERS — [illegible] IEN-0013

FASTENERS — [illegible] IEN-0014

FEEDERS — [illegible] IEN-0015

FEEDING — [illegible] IEN-0016

FEEDING — [illegible] IEN-0017

FILTERING — [illegible] IEN-0018

FILTERING — [illegible] IEN-0019

FURNACES — [illegible] IEN-0020

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . Descriptions . . Ratings . . See Page 10

▼ REPRINT—Identify by IEN-3322 if you write the maker ▼

A NEWS ADVERTISEMENT BY REMINGTON RAND, INC.

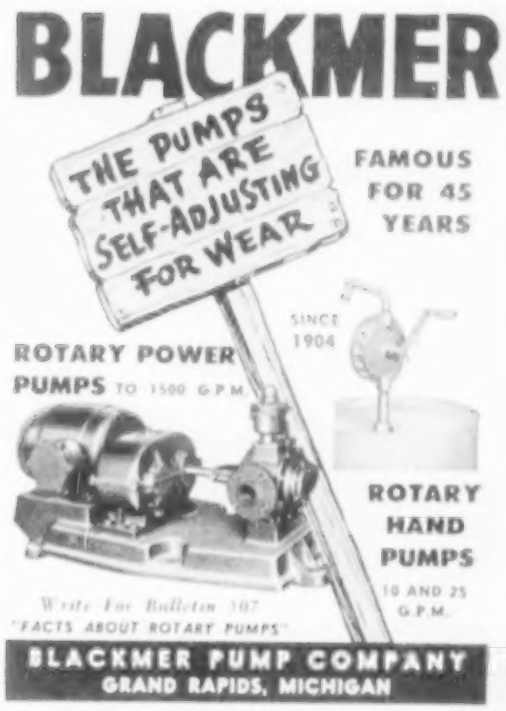
INVENTORY CONTROL . . . *How to control inventory to increase profits*

Source: REMINGTON RAND INC., Management Controls Library, Room 397, 315 Fourth Ave., New York 10, N. Y.

At underwriter's Laboratories, Inc., [illegible] IEN-0021

▼ REPRINT—Identify by IEN-3323 if you write the maker ▼

▼ REPRINT—Identify by IEN-3324 if you write the maker ▼



▼ REPRINT—Identify by IEN-3325 if you write the maker ▼

OUT OF 1001 TEST TUBES

FORWARD LOOKING IS THE WORD

FREE ENGINEER-ING SERVICE . . . [illegible]

CHICAGO WHEEL & MFG. CO.
1101 W. Monroe St., Dept. F1, Chicago 7, Ill.
Send Engineering Data Sheet . . . Send Catalog
Name
Address

BRIEFITS—Identify by IEN-3326 if you write the maker

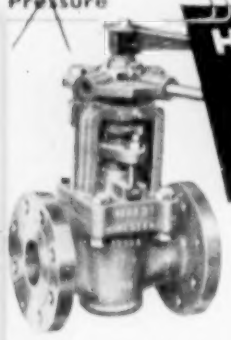
Only Kalamazoo offers all Timken bearing drive and for longer, smoother-running cutting performance—the engineering exclusive feature of the sturdy, rugged Kalamazoo construction. Soft form angles, taper seat and set screws remove any lateral strain. Change blades in 30 seconds. "Full view" of saw cut. Write today for full details on these cost cutting the Kalamazoo way.

MACHINE TOOL DIV. Kalamazoo TANK and SILO CO.
407 HARRISON STREET • KALAMAZOO 24, MICHIGAN

BRIEFITS—Identify by IEN-3327 if you write the maker

Corrosion
Temperature
Pressure

Can't faze



HOMESTEAD Lever-Sealed VALVES
They're Stick Proof

For 10 years, they have been the choice for difficult services where corrosion or temperature or pressure or combinations of these are a factor. For Sticky Liquids, Homestead valves are "stick proof" — they do their exclusive Lever-Seal construction, the problem-solver Stick Proof service. Plug equipped low nose bellows is close to a quarter inch — 10 to 15 times larger than a new, worn or rusty valve. And because all operating parts are protected from the damaging effects of low flash, process conditions and weather, long life, low maintenance and trouble free service are assured.

HOMESTEAD LEVER-SEALED VALVES are made in metals and alloys to meet service requirements, when ordering specify Homestead Stick Proof Lever-Seal Construction.

- Instant Stick Proof operation
- Quarter-turn fully open or closed
- Positive seal without lubrication
- Seating surfaces always protected in both open and closed positions. Corrosion practically eliminated
- Unobstructed straight-line fluid flow
- All operating parts protected from damaging effects of service conditions and weather

Send for your copy of Reference Book No. 10-A, 200 pages.

Homestead Valve Manufacturing Co.
"Serving Since 1892"
P. O. BOX 35 CORAOPOLIS, PA.

BRIEFITS—Identify by IEN-3328 if you write the maker

The Key
to production
problems

NEW LITERATURE—Continued

"These reviews total 145 this month"

FLOORS — Rubber materials and fabricated parts. 20-p. illus. catalog. "Industrial Manufacture." Materials. 1 page. Product Chemical & Mfg. Co., 1600 Columbia, Cincinnati 37, Ohio. IEN-3401

FURNITURE — Economical chairs for office use. Illus. catalog. Business Furniture Co., 28 Lagan, Worcester, Mass. Also Fireproof and Bar. 1600 New York, N. Y. IEN-3402

GAGES — Plug, ring, snap, taper, step, plain, standard, special, gauges, specials. Catalog. 36 pages. Cadillac Gage Co., 3000 E. Harmon Rd., Detroit 2, Mich. IEN-3403

GAGES — Thickness, bore, for measuring gauges. 1 p. illus. Bodine Manufacturing Company, 30 pages. Elm Manufacturing Co., 1000 Fourth St., Milwaukee, Wisc. IEN-3404

GAGES — Measurement with non-glass tubular liquid, continuous flow gauges, applications. Manual. Folder. 12 pages. L. S. Starrett Co., 24 Stearns St., Athol, Mass. IEN-3405

GENERATORS — Gasoline engine-driven electric generators, 10 to 35 kw. Illustrated data. Bulletin A 10-H. 8 pages. G. W. Onan & Sons, 43 E. Royalston, Minneapolis 5, Minn. IEN-3406

GRINDING — Power and hand operated buffing attachments, for lathes, attachments, specifications. Catalog. 32 pp. illus. Ideal Wolf Mach. Co., 2 Grafton & Madison, Cincinnati 6, Ohio. IEN-3407

HANDLING — Telescopic and folding boom of wood and steel. Illus. descriptive. Wood, steel. Folder. Catalog. 32 pages. G. E. Lewis Co., 1 Management St., Watertown, Wis. IEN-3408

HANDLING — Stacker, electric lift truck, tractor, 12 load and unloading-equipment series. Bulletin. Bulletin. 8 pages. Manchester Inc., 1600 Industrial St., Dayton, Ohio. IEN-3409

HEATING — Electric comfort heating equipment and furnaces, for home, business, commercial. Folder. HR 20. 8 pages. Lennox Furnace Co., 200 S. 12th St., Marshalltown, Iowa. IEN-3410

HEATING — Electric heating units, cable, for furnace, boilers, thermostats, and cable in conduit. Bulletin. D 40. 8 pages. Thermoid Co., 1600 E. Lake St., Chicago 31, Ill. IEN-3411

HOISTS — Electric, pneumatic. Catalog. 100-H. 16 pages. Kinnear Hoist & Trolley Co., 40 S. Kilbourn St., Dept. 3, Ohio. IEN-3412

HOSE — Industrial, carbon, fuel, oil, steam, chemical, acetylene, air, water, hydraulic, sand, data on and specs. Catalog. 100. 8 pages. B. F. Goodrich Co., 500 S. Main St., Akron 18, Ohio. IEN-3413

INDEXING — Rotary feed table with revolving index drum, product transformation or assembling operations. 1 p. 8 pages. Delsey Co., 1000 W. Market St., Akron 3, Ohio. IEN-3414

INSULATING — Sheet insulation, electrical insulating board and paper. Bulletin. Bulletin. Catalog. 300. 8 pages. Mica Insulation Co., 200 Hudson St., Cambridge, Mass. IEN-3415

LATHE ATTACHMENTS — Telescopic turning attachment for machine lathes. Bulletin. 1 page. Tool & Die Co., 1000 S. Chicago, Chicago, Ill. IEN-3416

METAL SHADES — Made of aluminum, steel, with light diffusing, reflecting surfaces. Metal shades. Folder. Catalog. 16 pp. Metal shades. Metal Lighting Co., 1000 S. Madison Ave., Chicago, Ill. IEN-3417

METAL TREATING — Heat treating, carburizing, annealing, hardening, metallurgical. Folder. Catalog. 12 pp. Metal Treating Co., Box 9-E, Springfield 1, Ohio. IEN-3418

METERS — Electric, automatic, recording, measuring, control, power, gas, water, steam, temperature, pressure, flow, etc. Catalog. Bulletin. Bulletin. 8 pp. Leeds & Northrup Co., 4901 Stenton Ave., Philadelphia 44, Pa. IEN-3419

MIXING — Electric, air mixers, mixer, mixing equipment, mixing, mixing equipment. Bulletin. Bulletin. Catalog. 1 page. Mixers, Inc., 1000 Fairfax St., Minneapolis, Minn. IEN-3420

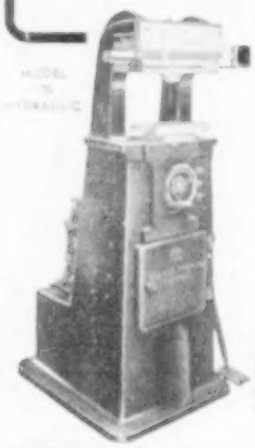
All Makers of These and All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 10

BRIEFITS—Identify by IEN-3329 if you write the maker

A complete steam plant for heating, industrial, commercial, etc. • Compact, easy-to-install, economical • Motor Gear Ratio • Electric Automatic Gas or Oil Burner • Boiler Capacity 1 to 10 gal. per hour • Boiler Pressure 15 lbs.

IEN-3333

MARK IT FOR MARKET!



Modern Marking Machines now enable most manufacturers of metal components to identify their products at rolling rate.

YOUR NAME
MODEL NUMBER
PART NUMBER
SERIAL NUMBER
OR DECORATIVE DESIGN ROLLED INTO YOUR PRODUCTS WILL HELP YOU MARKET THEM

Send prints of parts, showing required marking and its location on part, with finish, production for free recommendation.

WRITE FOR CATALOG

GTS GEO. T. SCHMIDT, INC.
4108 N. Ravenswood Ave.
CHICAGO • 13 • ILLINOIS

IEN-3334

The New COMPACT

ELECTRIC ROTARY ACTUATOR

SIDE MOUNTING
WEIGHT 2.25 lbs.

TRIM TROL

The new TRIM TROL is now greatly reduced in size and weight without sacrificing capacity or performance. Developed from the original models, which have enjoyed wide acceptance, these new units are available with the two mounting arrangements illustrated.

- Static Capacity—1500 inch pounds, min.
- Operating Load Capacity—350 in. lbs. (Std. Ratio)
- Position Transmitter or Potentiometer Built In
- Compliance with all applicable specifications

POSITIONING CONTROL
or electrical synchronizing available with our "SERVOSYN" unit

LEADING EDGE MOUNTING

NOW ALSO AVAILABLE
110 VOLT - 60 CYCLE
SINGLE PHASE AC

AIRBORNE
ACCESSORIES CORPORATION
25 MONTGOMERY ST. • HILLSIDE 5, NEW JERSEY
6926 MELROSE AVE. • HOLLYWOOD 38, CALIFORNIA
W. N. WRIGHT • DALLAS, TEXAS
The Ontario HUGHES OWENS CO. LTD. • OTTAWA, CANADA

NEW LITERATURE—Continued

"Are all these in your catalog file?"

MIXING — Low-cost mixer for small laboratory, plant, pilot-plant use. Mixes 30 ml. to 1 liter. Data. IEN-3001

OIL CREATORS — Automatic lubricators for compressed air lines. Data. IEN-3002

CLEANERS — Ultrasonic cleaners for small parts. Data. IEN-3003

VALVES — Solenoid valves for air, water, oil. Data. IEN-3004

CUTS — Catalog of cuts for industrial publications. Data. IEN-3005

PLASTIC MOLDING — Injection molding machines. Data. IEN-3006

FOUNDRY — Foundry equipment. Data. IEN-3007

FURNACES — Electric furnaces. Data. IEN-3008

FIBER TUBES — Fiber tubes for electrical insulation. Data. IEN-3009

PRINTING — Printing equipment. Data. IEN-3010

PROTECTIVE — Protective equipment. Data. IEN-3011

PROTECTING — Protecting equipment. Data. IEN-3012

HEATING — Heating equipment. Data. IEN-3013

PUMPS — Pumps. Data. IEN-3014

RECORDING — Recording equipment. Data. IEN-3015

RECTIFIERS — Rectifiers. Data. IEN-3016

RADIO — Radio equipment. Data. IEN-3017

RUBBER PRODUCTS — Rubber products. Data. IEN-3018

SAWING — Sawing equipment. Data. IEN-3019

SEALING — Sealing equipment. Data. IEN-3020

All Makes of Tools and All Other Products Are Listed in THOMAS REGISTER — Description — Ratings — See Page 16

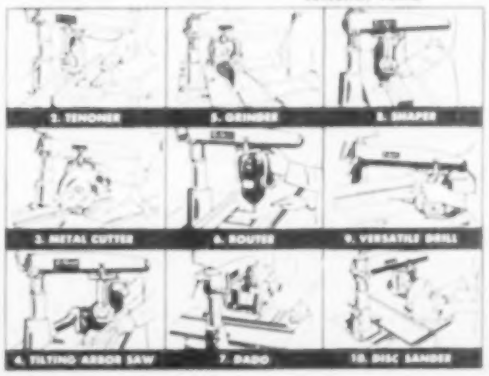
IEN-3336

10 POWER MACHINES IN ONE!

1. RADIAL ARM SAW

Here's what you have and more with your power-feed cross-arm position. DeWalt Dry Saw accepts table-back fence, tilting arbor, vertical. Write for catalog.

DE WALT INC.
104 Fountain Avenue
Lancaster, Penna.



IEN-3337

STAYNEW PIPE LINE FILTERS

ELIMINATE MOISTURE OIL DIRT PIPE SCALE

Every power that Staynew Filters effectively clean their pulsing air supply. By preventing the passage of foreign matter they protect cross wear, tools, bearings, damage to materials and complications with processes.

Facts on Dollinger Cross Pneumatic Principles:

- MECHANICAL SEPARATION—Holds out Grit and Scale from passing into stations of contamination.
- DEFLECTION—Acts as a pressure drop that separates Moisture, Oil, Tarry Matter, which remove the further material.

DOLLINGER CORPORATION
1 CENTRE PK., ROCHESTER 3, N. Y.
REPRESENTATIVES IN PRINCIPAL CITIES

IEN-3340

Dick 960 A B Dick 960 A B Dick 960

NEW A. B. DICK MIMEOGRAPHS

black-on-white COPIES or colored copies of anything typed, written or drawn . . .

produced FAST on most all paper and card stocks at speeds ranging up to 180 copies per minute . . .

and EASY on today's A. B. Dick mimeographs with many new features and improvements for more efficient operation.

WRITE TODAY for full details

A·B·DICK COMPANY
5700 Touhy Ave. • Chicago 31, Illinois
For use with all makes of suitable stencil duplicating products.

IEN-3339

INCREASE LIFTING CAPACITIES WITH KOEHRING TRUCK CRANES

On scattered lifting jobs requiring frequent moves, you'll find it pays to use Koehring rubber-tired Truck Cranes. 204 safely lifts up to 50,000 lbs. — 11.1 tons more than its crawler rating. Smaller 205 Truck Crane (illustrated) with its 20,000 lb. lift on rubber, increases load capacities about one-half.

ALSO CHECK EXTRA BOOM REACH, EXTRA TRAVEL SPEED AND MOBILITY

Mail today to: KOEHRING CO. Dept. IEN, Milwaukee 16, Wis.
Please send literature on: 204 Truck Crane 205 Truck Crane
NAME TITLE
COMPANY
ADDRESS
CITY STATE
Type of plant or work

KOEHRING TRUCK CRANES

▼ BRIEFITS—Identify by IEN-3340 if you write the maker ▼

PULLS, KNOBS and PENDANTS

Specify Grigoleit molded plastics and you'll be ahead in time and money. They're styled for sales . . . ready for prompt delivery. Write today for fully-illustrated catalog.

THE GRIGOLEIT COMPANY
"Ask Exactly Glass in Plastics"
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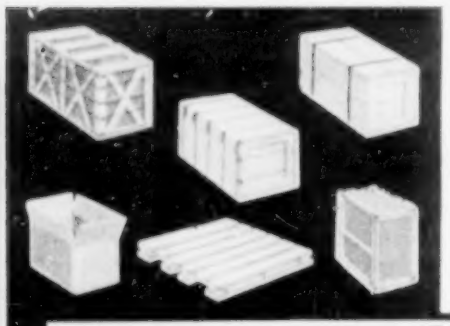

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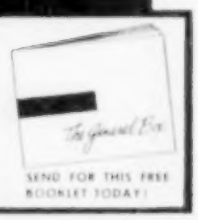

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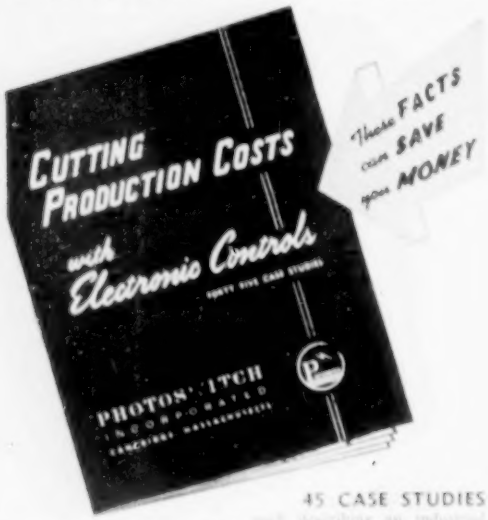

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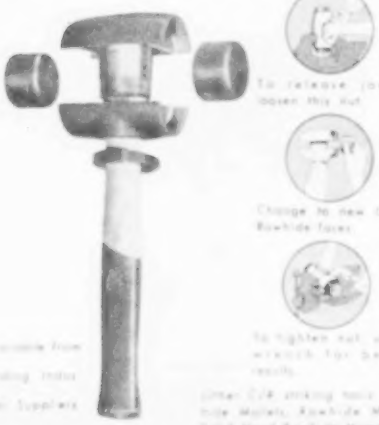

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TRUCKS . . . Power lift trucks, pallet trucks, data sheets, data sheets on engine converting, industrial engines. 16 pages. Clarkson Power & Equipment Co., 4750-58 Hamilton, Detroit, Mich. IEN-3002

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All Makers of These and All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 30

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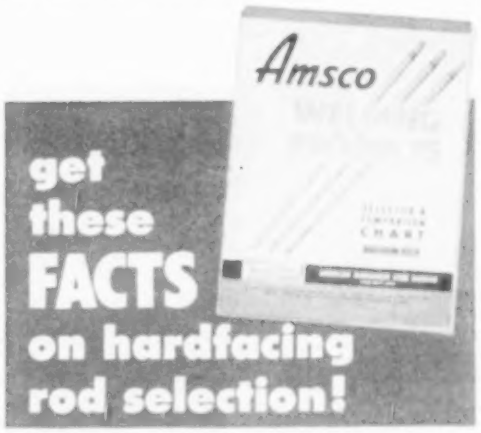

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You'll like these new, lightweight, easy wheeling Sterlings designed for toilet material transport service. Famous Sterling balanced construction puts 80% of the load on the wheel . . . only 20% on operator. Equipped with long wood handles, formed to fit operator's hands. Steel channel legs and reinforcements are cut the right height. Means less stoop for operator and greater leg clearance. Steel wheel, roller bearing whose with pneumatic tire or zero pressure cushion type wheel can be furnished. Write for new Wheelbarrow Catalog.

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MAGNET . . Base and column assembly for gage holding at a machine or bench

Source: duMONT CORP
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New design ... The shafts ...

▼ RIEFFITT—(Answer to) IEN - 3358 if you write the maker ▼

METAL TREATING . . Coloring liquid to blacken steel, cast iron, zinc

Source: BROWNELL INDUSTRIES
50 Industrial St., Montezuma, Iowa

Aqua blue, clear water consistency

Color finishing ...

The finish ...

▼ RIEFFITT—(Answer to) IEN - 3359 if you write the maker ▼

BENDING . . Hand operated machine for 1/2 and 3/4 in. pipe and conduit

Source: TAL BENDER INC
415-19 N. Water St., Milwaukee 2, Wis

A bending head ...

All Makers of These And 50 Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 50

▼ RIEFFITT—(Answer to) IEN - 3360 if you write the maker ▼

Only the New TYPE "R" MORRIS SLURRY PUMP has these 4 features

1 Gland is under suction pressure only. This feature practically eliminates packing troubles.
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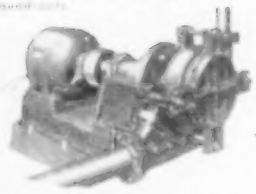
The new Type "R" Morris Slurry Pump handles abrasive, corrosive, or non-corrosive liquids ...



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Baldwinsville, N. Y.

MORRIS CENTRIFUGAL PUMPS

▼ RIEFFITT—(Answer to) IEN - 3361 if you write the maker ▼

New Automatic Scale with Dust Control . . .

Here is EXACT WEIGHT's new unit for accurate automatic packaging, weighing and checking of free flowing materials in open mouth bags up to 150 lbs. The new unit consists of a time proven heavy duty EXACT WEIGHT Scale (Floor operation) with dial of 4 oz. over and under weight by 1 oz. graduations, automatic dustless valve ... double photo cell electric cut off. This scale, already in use in the great carbon black industry, has many industrial uses in automatic packaging of free flowing materials where dust control is a factor. For full details write for information covering Model 1224CB.

EXACT WEIGHT SCALES
Industrial Precision

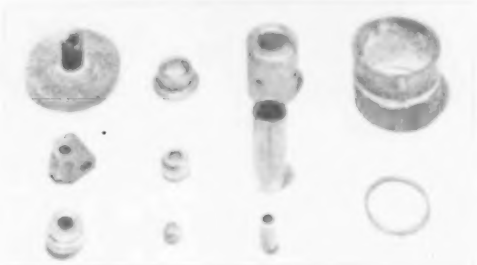
THE EXACT WEIGHT SCALE COMPANY
130 W. Fifth Avenue, Columbus 8, Ohio
1920 Bloor St. W., Toronto 18, Canada

▼ RIEFFITT—(Answer to) IEN - 3362 if you write the maker ▼

A NEW ADVERTISEMENT BY POWDER METAL PRODUCTS, INC.

POWDERED METAL PARTS . . Bearings, bushings, machine parts as specified

Source: POWDER METAL PRODUCTS INC.
502 S. St. Marys St., St. Marys, Pa.



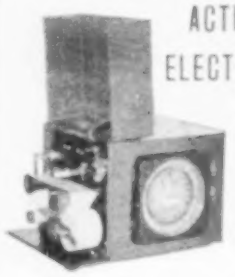
Illustrated ...

The company ...

FREE—A 4-PAGE BULLETIN CONTAINING UP-TO-DATE INFORMATION ON POWDERED METAL PRODUCTS

▼ RIEFFITT—(Answer to) IEN - 3363 if you write the maker ▼

RECORDING MECHANICAL COUNTER ACTUATED BY AN ELECTRICAL IMPULSE



It operates on the output of a scaler, photo tube, or other electrical unit . . . permanently records counts on a 2 1/4" tape . . . automatically resets to zero.

In Radioactive Research it saves precious time by eliminating many hours of manual labor, resulting in greater economy and efficiency.

In Industry it maintains a permanent record automatically, recording production and time each hour.

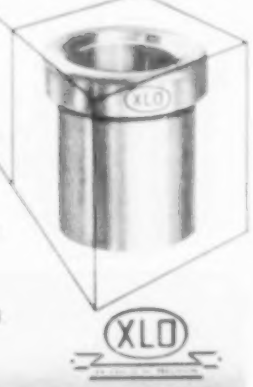
Write for illustrated circular S-C-12

STREETER-AMET COMPANY
Automatic Weight Recorders and Scales
High Speed Counters — Since 1888
4101 Ravenswood Avenue Chicago 13, Illinois

▼ REPRINT—Identify by IEN-3364 if you write the maker ▼

PRECISION

IN A SMALL PACKAGE



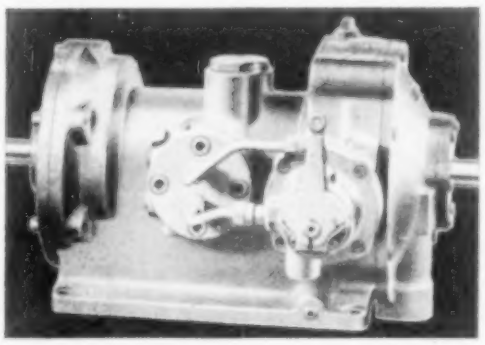
EX-CELL-O precision means longer life . . . more accurate performance . . . greater economy in DRILL JIG BUSHINGS. For list of large stock of A.S.A. standard sizes available write for your copy of Ex-Cell-O Bulletin No. 11882-B.

XLO

EX-CELL-O CORPORATION
DETROIT 32, MICHIGAN

▼ REPRINT—Identify by IEN-3365 if you write the maker ▼

New! Small!



Oilgear Fluid Power Transmissions

Two-way variable speed. Up to 3 h.p.
Output 0 to 1600 R.P.M. (Reversible)
Lighter · Simpler · Sturdier · Smoother

The outstanding fact about these new, small and versatile Oilgear Fluid Power Transmissions is that during the past 5 years more than 100 thousand similar units have been built, tested and proved in the toughest tests imposed by man. They weigh only 90 lbs. They are rugged, constructed throughout, simple in design, dependable in performance, smooth in operation. These compact units are completely enclosed and sealed against dirt with integral relief valves in the fluid passages for protection against overload.

These transmissions efficiently convert a constant speed source into infinitely variable output speeds. They provide smooth, stepless, positive speed control from zero to maximum in either direction. Their positive drive is not affected by any appreciable impact or variations in load. They are little power, and always in proportion to work done.

They provide backlash-free service with instantaneous response to remote control and offer a choice of manual, electric or hydraulic controls. They provide quick, continuous reversal and a host of other advantages.

These transmissions are now used on stoker machines, conveyors, mixing attachments, wire machines, spring coiling machines, furnace drives, rotarie supply pumps, compressor heads, grinding wheel, head drives and many other machines and processes. THE OILGEAR COMPANY, 1567 W. Pierce Street, Milwaukee 4, Wisconsin.

Ask for New Bulletin

Bulletin 9T120 completely describes the new small Oilgear Fluid Power Transmissions. 8 pages and be sent free at your request. Write today.

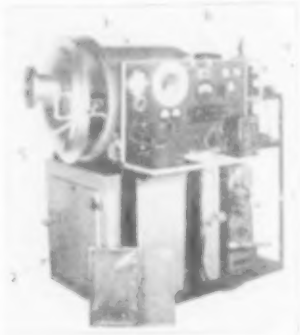
Oilgear Fluid Power

PUMPS, MOTORS, TRANSMISSIONS, CYLINDERS AND VALVES

▼ REPRINT—Identify by IEN-3367 if you write the maker ▼

DRYING . . Vacuum equipment sublimes moisture from frozen materials

Source: PROCTOR & SCHWARTZ INC.
726-30 Tabor Road, Philadelphia 20, Pa.



Freeze Drying has brought a new process into a field that could not have developed without it. Developed originally for medical use, it is now being used for food products, pharmaceuticals, and other products. Freeze Drying consists of freezing the product, then sublimating the moisture from it in a vacuum chamber. The sublimation takes place at temperature below 32°F. The product is then packaged in the chamber and sealed in a vacuum. The product can be stored for years without refrigeration and will rehydrate to its original form when water is added.

The vacuum chamber I is a cylinder 24" in diameter and 36" long. It is made of stainless steel. The door is a flat hinged cylinder on the front and rear. The door is held closed by a clamp. The door is sealed by a rubber gasket. The door is opened by a handle. The door is closed by a handle. The door is locked by a handle

▼ REPRINT—Identify by IEN-3373 if you write the maker ▼

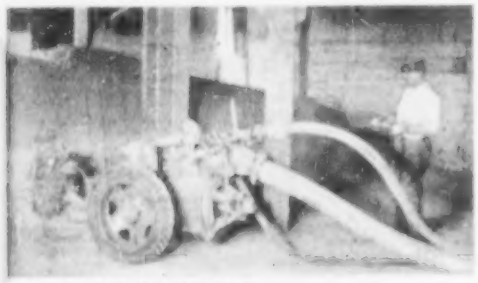
THEY BOOST YOUR PROFITS

The BROWN TIME-SAVING RACK saves the time previously lost in locating and tally of stock in entire length from the stockyard, through cut, the Brown Rack requiring but a few inches of side clearance. Each length, width and thickness of stock is displayed in an order suitable for future reference. Workmen waiting for stock are saved a great deal of time and returned to their productive duties in this way a maximum of output. Any time you require additional storage space, all you need do is to add more racks, it is easy to advance it at any time, you can do so, for it is not bolted to the building. It is a simple double sided rack of many years of service and long life, with no heat depreciation to your stock at all. SEND FOR BULLETIN No. 2A-N DESCRIBING THE

• BROWN TIME-SAVING RACK •

BROWN ENGINEERING CO.
122 NORTH THIRD STREET READING, PENNA.

▼ REPRINT—Identify by IEN-3374 if you write the maker ▼



FLOW IT OUT
. . . with a FULLER-KINYON conveying system

The illustration above demonstrates one of the major advantages of the Fuller-Kinyon Conveying System, the ease with which dry powdered materials such as cement can be managed directly from a short hold, box car, bin, etc. . . . In one operation.

It's all done with air and based on the simple principle that any dry powdered material, when aerated, can be made to flow like water through a pipe line. For short simplicity, convenience and low operation cost . . . it's hard to beat. It's fast, and it poses requirements as low, per ton of material handled.

For additional information on these and the many other major advantages of the Fuller-Kinyon System, write for the 32 page interesting Bulletin FK-10-A.

FULLER COMPANY, Catasauqua, Pa.
120 So. LaSalle St., Chicago 3
420 Chanslor Bldg., San Francisco 4

▼ REPRINT—Identify by IEN-3375 if you write the maker ▼

NOW GRIND RELIEF on SPIRAL-FLUTED TOOLS
FAST—EASY—ACCURATE

The Cincinnati Grinder
Also manufacturers of automatic precision lathes, chucks of all types and radial wood-working machines, for straight-line ripping, cut-off, tenoning, boring, mortising, etc.

Specialists in Machine Equipment for wood working industry, whether it involves a single machine or an entire plant. When you consider radial equipment, remember the name Fitchburg. Write for catalog and specify from stock.

SEND FOR BULLETIN

DETROIT REAMER & TOOL CO.
Makers of Special High Speed Cutting Tools
1331 East 7 Mile Rd. Detroit 12, Michigan

▼ REPRINT—Identify by IEN-3376 if you write the maker ▼

RESISTOR . . Alloy ribbon assembly
17 to 93 amp., to 375 deg. C. rise

Source: EUCLID ELECTRIC & MFG. CO.
54 Edwards St., Madison, Ohio

Slide connection compensates for expansion and contraction in changing temperature and prevents buckling in the new bar in this recently improved Expandolac Edgewound resistor. Porcelain insulators mounting the bar are fastened at the two ends of each bar so as to prevent excessive cracking. Mounting is between a pair of channels in required number. Terminals may be adapted as desired.

Typical applications include speed control and starting service for motors, load testing, welding control, for elements up to about 12½ to 25 in. in overall length. Element diameter is 2 inches. Resistance values from 1.14 to 104 ohms on the standard line, 0.2 to 105 ohms on the larger sizes. Other resistances are supplied for special connection.

▼ REPRINT—Identify by IEN-3377 if you write the maker ▼

TUBE . . Flexible galvanized steel,
lined inside for granular materials

Source: CHICAGO METAL HOSE CORP.
1313 S. 3rd St., Maywood, Ill.

Designation is Abrasion Resistant

Inside diameter ranges from [illegible] with corresponding outside diameters between 2¼ and 4½ in. in a new flexible metal tube made of interlocked galvanized steel strip. The tube is lined inside with an inner galvanized steel strip. The liner stopping over the spaces between tube convolutions to provide a smooth inner surface.

The tube is designed to convey materials such as grain, sugar, foundry sand, construction, sand, gravel, dry manufactured food products. Length of each production is about 20 feet. Shorter lengths are to order. Brochure.

▼ REPRINT—Identify by IEN-3378 if you write the maker ▼

HANDLING . . Elevating table
for sheet materials, rates 5 ton load

Source: LYON-RAYMOND CORP.
3567 Madison St., Greene, N. Y.

Compound leverage in this new assembly of the company's elevating table provides a total lift movement of 24 in. from 12 in. above the floor line. The platform mounted on the lift mechanism measures 36 by 92 inches. Rail and wide extension can be specified. A hydraulically-managed system is a pump of one with motor drive is available for the operating movement. Wheel and caster mounting is available too, in which arrangement the platform height is 30 inches.

On Making of These And All Other Products See Listed In THOMAS' REGISTER Industrial Buyings See Page 50

▼ REPRINT—Identify by IEN-3379 if you write the maker ▼

WM. A. FORCE AND COMPANY
INCORPORATED
64 WHITE STREET, NEW YORK 13, N. Y.

▼ REPRINT—Identify by IEN-3380 if you write the maker ▼

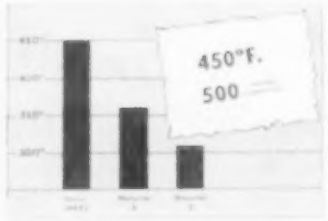
Dirt just CAN'T escape

Unique cartridge-type fluid filter keeps shape—collects every particle

CUNO
Fluid Conditioning
Removes More Sizes of Solids from More Types of Fluids

NO FLUID IS BETTER THAN ITS FILTRATION

▼ REPRINT—Identify by IEN-3381 if you write the maker ▼



Greater
HEAT RESISTANCE
is available in this
NEW
GLOSSY-FINISH
DUREZ PHENOLIC

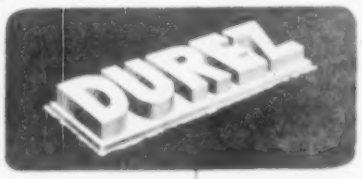
• A new Durez molding compound now provides a higher gloss in compression specimens of phenolics and melamines. How can we make this product an even greater contribution to you?

The new gloss in Durez 14893 black molding compound. On your next moisture-filled, heat-of-solvents-resistant compression or transfer job, specify the F molding type of Bakelite phenolic or melamine compounds. Improved appearance is shown further in resistance to crazing and. Only single compounds of its kind are available. Durez 14893 compounds are the necessary high gloss molded finish in observations of your molded ware.

Molding compounds are your point. Even those that are further ground a molded. Brochure is ready when Durez 14893 is ready. For molded samples and application information, contact us and we will put you in touch with the new Durez material.

Your perfect answer may be
DUREZ 14893

SEND FOR DATA—

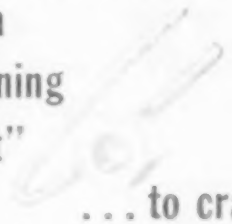


Phenolic Plastics that fit the job

PHENOLIC RESINS
- MOLDING COMPOUNDS
- INDUSTRIAL RESINS
- PROTECTIVE COATING RESINS

▼ BULLETIN—Specify by IEN-3383 if you write the maker ▼

Have you a metal-cleaning "tough nut" . . . to crack?



Is it the removal of:

- oils or greases?
- engrafted drawing compounds?
- buffing compound residues?
- lime scale or rust scale?
- flux residues?
- smoot or soot?
- rust preventives?
- carbon smut?

Or is it preparation for:

- phosphating?
- galvanizing?
- painting?
- porcelain enameling?
- anodizing?
- welding?

FREE When these things bother you, remember that there is no charge for Oakite advisory service on our metal-cleaning job. Just write to Oakite Products, Inc., 101 Thomas St., New York 6, N. Y.

Offices in all Principal Industrial Areas of U. S. & Canada

OAKITE SPECIALIZED INDUSTRIAL CLEANING MATERIALS · METHODS · SERVICE

▼ BULLETIN—Specify by IEN-3384 if you write the maker ▼

ELECTRIC WHEELS

Modernize Trucks and Trailers

A full line of wheels for baggage trucks, industrial trailers, floor trucks, mail carts and other portable equipment.

ELECTRIC wheels are furnished with or without roller bearings to fit your own axles or complete with axles. Steel tires, molded-on-tires, or pneumatic tires.

There is a full range of sizes and our experienced engineers are at your service.

Write us for full information.

ELECTRIC WHEEL CO., 2932 Spruce, Quincy, Ill.

▼ BULLETIN—Specify by IEN-3385 if you write the maker ▼

RUBBER DOES IT!

Only rubber does that job so really necessary in countless applications — resist the damaging action of oils, gases, fluids, greases, continuous flexing, abrasion, extreme high and low temperatures, and many other problem conditions. Throughout Industry, Acushnet precision-molded rubber parts and products of natural and synthetic rubber are performing their jobs with the greatest efficiency and economy. We'll gladly suggest remedies for your troublesome applications.

Acushnet PROCESS COMPANY
NEW BEDFORD, MASS., U. S. A.
Address All Correspondence to 750 Belleville Ave., New Bedford, Mass.

▼ BULLETIN—Specify by IEN-3386 if you write the maker ▼

FILTERING . . Cartridge type unit for non-corrosive liquid in pipe line

Source: MARVEL ENGINEERING CO.
623-27 W. Jackson Blvd., Chicago 6, Ill.

Wire cloth element, [illegible]

Application: [illegible]

The wire mesh [illegible]

▼ BULLETIN—Specify by IEN-3387 if you write the maker ▼

COMMUNICATING . . Paging equipment records and broadcasts voice messages

Source: AMPLIFIER CORP. OF AMERICA
398-19 Broadway, New York 13, N. Y.

This new equipment includes a Twin-Tape Transcriber, mounted on a [illegible] portable, isolated board trucks on standard rack, a 10-tube recording-playback amplifier, a loud speaker, reversing mechanism for instantaneous repetition of a given message and a [illegible] stopper reset for a station to a switch on the operator's console. Housing dimensions are about 12 by 20 by 14 inches. Complete price, [illegible] additional. Frequency response is 30 to [illegible] cycles at the standard 7½ ips tape speed. [illegible]

Installation: [illegible]

Application: [illegible]

Installation: [illegible]

All Makers of Items and Services Featured Are Listed in THOMAS' REGISTER — Descriptions — Ratings — See Page 30

▼ BULLETIN—Specify by IEN-3388 if you write the maker ▼

▼ BULLETIN—Specify by IEN-3389 if you write the maker ▼

▼ BULLETIN—Specify by IEN-3390 if you write the maker ▼

for continuous heavy-duty operation

O-CE Compressors

For continuous, economical supply of air for heavy duty CP quality-built OCE COMPRESSOR is unsurpassed. Complete lubrication minimum power consumption. Steam lined air passages make air flow resistance negligible. CP Multi-Step Control handles partial load demands economically. Horizontal double-acting, water-cooled type, with direct-mounted synchronous motor drive, models up to 1,750 h.p. for pressures up to 5000 pounds.

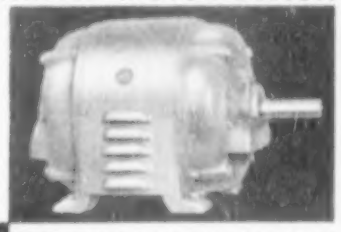
CHICAGO PNEUMATIC TOOL COMPANY
8 East 44th Street, New York 17, N. Y.

PNEUMATIC TOOLS · AIR COMPRESSORS · ELECTRIC TOOLS · DIESEL ENGINES
ROCK DRILLS · HYDRAULIC TOOLS · VACUUM PUMPS · PRESSURE ACCESSORIES

▼ BULLETIN—Specify by IEN-3391 if you write the maker ▼

MOST ADVANCED MOTOR DESIGN

ASBESTOS PROTECTED
•
NORMALIZED CASTINGS
•
LUBRIFLUSH
•
DUAL CYCLONE VENTILATION



ALSO VARIDRIVE AND SYNCRODRIVE TYPES

U.S. UNICLOSED MOTOR

Self-lubricated for normal life plus Lubriflush for longest life

[illegible]

U.S. ELECTRICAL MOTORS Inc.
[illegible]

Free Bulletin

REQUEST FOR UNICLOSED BULLETIN

U. S. Electrical Motors Inc.
[illegible]
Please Send Bulletin
Name
Company
Address
City ZONE STATE

BARFITT—Identify by IEN-3392 if you write the maker

LANSING SPARTAN TRUCK

Years of experience have gone into the Lansing Spartan Truck, eliminating complexity or reduction to a minimum unsatisfactory features of most other trucks.

Lansing Spartan Trucks are built to carry heavy loads and are easy to use, therefore. Designed for extra long service under factory and warehouse conditions, the Lansing Spartan give true, trouble free service.

The Lansing Spartan can be equipped with racks, boxes or other type of superstructure engineered to fit the users needs and makes an ideal truck for use with warehouse trailer or cable car conveyor systems.

LANSING COMPANY

TRUCKS • TRAILERS • BARROWS • CASTERS • CARTS

"Keep Your Products on Wheels"

MAIN OFFICE AND FACTORY

LANSING, MICHIGAN

BRANCHES AND REPRESENTATIVES IN PRINCIPAL CITIES

BARFITT—Identify by IEN-3393 if you write the maker

THE *Doyle* VAC-IT

INDUSTRIAL - COMMERCIAL

VACUUM CLEANERS

Regardless of the type of business in which you are engaged YOU CAN PROFIT by using the DOYLE VAC-IT. Let our new illustrated booklet help you determine how the DOYLE Vacuum Cleaner can be of service to you. Complete advice is supplied, including details of various methods and a list of many users. Send today for your FREE COPY.

***Doyle* VAC-IT**

DOYLE VACUUM CLEANER CO., 2235 Sheridan St., S.W., Grand Rapids 7, Mich.

BARFITT—Identify by IEN-3394 if you write the maker

The SYMBOL of QUALITY for 62 YEARS

WASHERS — Standard and Special. Every Type, Material, Purpose, Finish.

STAMPINGS of every Description — Blanking, Forming, Drawing, Extruding.

Your most dependable source of supply — the world's largest manufacturer of Washers, serving industry since 1887. Over 22,000 sets of Dies.

Submit your blueprints and quantity requirements for estimates.

WROUGHT WASHER MANUFACTURING CO.

The World's Largest Producer of Washers

2001 S. 6th St., Milwaukee 7, Wis.

BARFITT—Identify by IEN-3395 if you write the maker

CLAMP . . Forged steel assembly to hold tools or work on machine table

Source: CARROLL & SHIPLEY MACHINE TOOL PRODUCTS
718-22 W. 12th St., Anderson, Ind.

New C & S clamp consists of two carbon body forgings (no gunned out flat) and a hold-down bolt assembly that oscillates on a valve seat and locks in socket arrangement on the body. The clamp can be supported horizontally or at an angle to secure position. It is made in two designs that differ in the jaw design at one end where one jaw is one assembly permit hooking the foot to apply on a vertical surface or on a ledge.

Three assemblies vacation 4½ to 5½ in. between jaw and lock on the bolt foot. Maximum extension is 3 and 4½ inches. Four-page bulletin, "Jigs Fixtures With Safety," presents the drawings showing types of applications.

BARFITT—Identify by IEN-3396 if you write the maker

STEEL . . Stainless steel strip, bright annealed, gages .005 to .070 in.

Source: WALLINGFORD STEEL CO.
49 Valley Road, Wallingford, Conn.

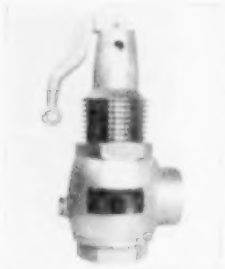
Sample available upon request

Mirror-like finish characterizes the company's new bright annealed, 18% chromium steel strip. Widths are available in widths to 12 inches. Any temper can be specified.

BARFITT—Identify by IEN-3397 if you write the maker

VALVE . . Safety relief design for steam pressures to 325 pounds

Source: MAGNUS BRASS MFG. CO.
527 Reading Road, Cincinnati 2, Ohio



Type IV designation now unit in the company's line of safety relief valves that is intended for heavy-duty service as on the steam boilers located in dense communities. It is equipped with a nickel-alloy spring in standard construction, for setting to a range between 245 and 300 pounds. It can be supplied for pressures to 325 pounds. The spring is enclosed in a tight housing that assists in the adjusting load.

Two sizes have 1¼ and 1½ in. inlet. Both have outlets that measure 1½ inches. The valve mechanism employs a nickel-silver feather valve and base, and frictionless adjusting ring. Overall height is about 10 inches. It carries ASME and National Board approval within its ratings.

All Makers of These and All Other Products Are Listed in THOMAS REGISTER — Descriptions — Ratings — See Page 16

BARFITT—Identify by IEN-3398 if you write the maker

Gear Unit Made Better . . . but Cheaper with AMGEARS know-how

Wanted: [illegible]

Supplied: [illegible]

Production and precision spurs, sprockets, helicals, worms and wormgears; straight and spiral bevel gears and racks.

AMGEARS, INC.

4455 WEST 63rd STREET
CHICAGO 38, ILLINOIS

A SUBSIDIARY OF AUTO COMPONENTS CONTRACT MANUFACTURERS
Detroit • Cleveland • Chicago

BARFITT—Identify by IEN-3399 if you write the maker

WHEN YOU PUT A LOT OF LITTLE ONES INTO A BIG ONE — MAKE SURE IT'S A

JELLIFF DIPPING BASKET

"Is twice making Wire Mesh have taught us a lot about this diversified, but fascinating and [illegible]

We make Dipping Baskets of any shape, mesh and in any size and finish [illegible] precision and private impact.

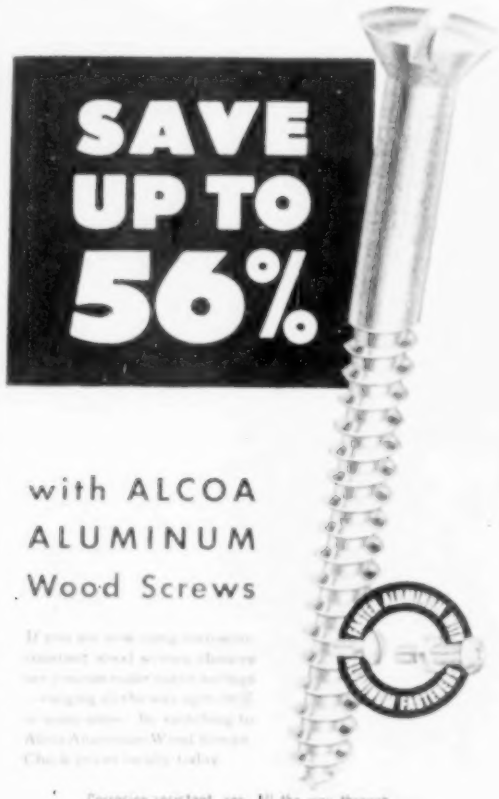
Naturally, we believe we make them [illegible] a little bit better than the other fellow's [illegible] — and a lot of people have seen it [illegible] regularly for their Dipping Baskets [illegible] we serve well in:

Industry Degreasing — Pickling — Plating — Anodizing — Washing — Heat Treating

— or for any plain Bulk Handling — [illegible] because of small parts in large quantities [illegible] for JELLIFF give you a [illegible] obligation, consult for your next requirements of Dipping Baskets. Send a 300 page of specifications to Department 12

THE C. O. JELLIFF MFG. CORP.
SOUTHPORT CONNECTICUT

BARFITT—Identify by IEN-3400 if you write the maker



with ALCOA ALUMINUM Wood Screws

If you are now using corrosion-resistant steel screws, chances are you are making another costly mistake — using screws when nails will do as well or better. By switching to Alcoa Aluminum Wood Screws Check power locally today.

Corrosion-resistant: yes. All the way through.
Lower in cost: yes. Enough to save you sizeable money.

But this is not all. Alcoa Aluminum Fasteners of all types are beautiful, too. They have a well-finished, rather aged-in-wood look that shows up any product. And they never tarnish and rust stained.

Made of a particularly tough, aluminum alloy, Alcoa Fasteners are strong and light. Handy and economical to install. Available with matching nut or pin type screw in sizes 1/4 to 1/2 in.

Alcoa manufactures and sells a complete line of aluminum serving fasteners, including screws, bolts, rivets, washers, nuts, and cotter pins. Prices are lower for the smaller, wide-spaced, rolling or wicket type.

FREE SAMPLES: Write today for trial sizes and more information to: ALUMINUM Company of America, 1-C-D Gulf Building, Pittsburgh 19, Pennsylvania.

"The trademark of Alcoa Fasteners and other Alcoa products is the symbol "Aluminum" in your familiar telephone directory.

THE LOWEST-COST CORROSION RESISTANT FASTENERS ARE

ALCOA *Aluminum* FASTENERS

NUTS • CONTACT & PLATE • CRAMPS, HOOKS & CLEVISES • WIRE • ROD • BAR • TUBING • PIPE • CLAMP TO & PERMANENT WOOD CASTINGS • FORGINGS • IMPACT EXTRUSIONS • ELECTRICAL CONDUCTORS • CLEAN MACHINE PRODUCTS • FABRICATED PRODUCTS • ELECTRODES • FOIL • ALUMINUM PIGMENTS • MAGNESIUM PRODUCTS

IEN-3402

FELT SEALS

They lubricate—and retain lubricants, including pressurized—exclude dust, dirt, water—give effective protection against failure due to leakage or impurities—many types both plain and laminated meet wide range of conditions.

"For complete technical information, ask for "Felt Seals, Their Design and Application," Data Sheet No. 11, the authority on this important subject.

American Felt Company

TRADE MARK

General Offices: 18 Glenville Road, Glenville, Conn.

Sales offices in all principal cities

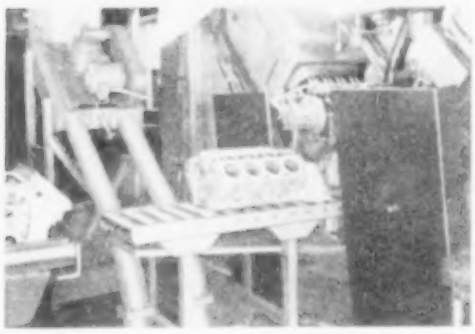
IEN-3403

Fine Car Manufacturer

SELECTS

Houdaille CONVEYOR

to solve difficult chip removal problem



Houdaille will do the job for YOU!

METAL WORKING INDUSTRY

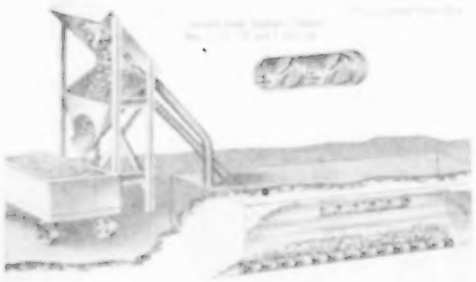
MATERIAL FROM DUST COLLECTORS

PLASTIC POWDERS

PACKING PLANTS

SOAP MANUFACTURING

MANY OTHERS

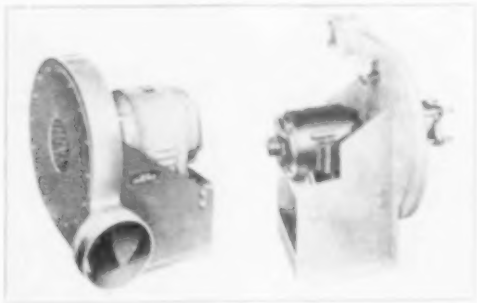


Honan-Crane Corp.
Houdaille-Hershey Corp.

IEN-3405

BLOWERS . . Centrifugal designs for air and gas supply to a furnace

Source: UNITED STATES AIR CONDITIONING CORP. 2562-66 Como Ave., Minneapolis 14, Minn.

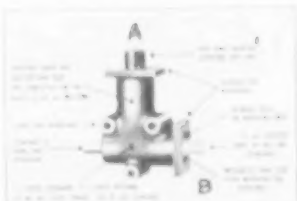


The Turbo blower

IEN-3406

DRIVE . . Right angle gear head, standard at 1 to 1, optional at 2 to 1

Source: AIRBORNE ACCESSORIES CORP. 23-27 Montgomery St., Hillside 5, N. J.



New design

Two types

Bulletin

IEN-3407

PROTECT WORKMEN

CON-L-DUIT

APPROVED SAFETY ENCLOSURE

SAFETY IS CHEAP! Protection from open conductor bars on cranes and monorails is now available at low cost with CON-L-DUIT, a specially compounded non-permanent insulation. It complies with Safety Codes of all States. Two sizes to fit all new and existing figure-8 conductor bar systems. Is practical on curves, straight runs, switches, interlocks and drop sections. Easy to install, safe, foot-proof, and economical.

CON-L-DUIT is sold and serviced by electrical contractors and crane equipment dealers everywhere. Write for illustrated literature.

calabar CALABAR CORP.
8474 OTIS STREET • SOUTH GATE, CALIFORNIA

IEN-3409

NORTHERN HI-LIFT HEAVY DUTY HOISTS

FLOOR CONTROL TYPE

CAB CONTROL TYPE

SWIVEL TRUCK TYPE

ALSO STANDARD AND TRAMRAIL TWO-TRUCK TYPES

For safe, dependable handling of heavy loads in heavy-duty service, NORTHERN HI-LIFT HOISTS permit more diversified, general purpose use—wider adaptability to changing service demands.

ASK FOR BULLETIN H-110

NORTHERN ENGINEERING WORKS, 2615 Atwater St., Detroit 7, Mich.

NORTHERN CRANES AND HOISTS

IEN-3409

Empco JACKS

Set and KEEP Your Machines LEVEL!

Machine Tool Manufacturers strongly emphasize the need, not only to set machines level, but to keep 'em that way. Periodic relevelling is essential for accurate work tolerances. How often, depends on the type of foundation. No method of machine setting is stable enough to maintain the accuracy of initial leveling. It is important to check after first month of operation, then check periodically and re-level whenever necessary.

When a machine is set on EMPCO JACKS, the whole operation is the work of but a moment. Simply apply a wrench to the "hex" screw head, turn right or left until your level indicator reads "zero".

3 SIZES

EMPCO

THE ENTERPRISE MACHINE PARTS CORPORATION
3737 JEROME AVE. DETROIT 12, MICH.

IEN-3410

SYNTHANE is a Whale of an INSULATOR

Synthane laminated plastic have a combination of superior electrical qualities that may make them just the materials you are now seeking to make your product better.

One advantage is excellent electrical insulating ability. Others are high dielectric strength, low dielectric constant and low power factor. Together with Synthane's light weight, ease of machining and good mechanical and thermal characteristics, they make Synthane a valuable material for many applications in almost every industry.

If your present materials are in any way unsatisfactory and your quality standards are high it may pay you well to find out more about Synthane. For your copy of the Synthane catalog, clip and mail the coupon today.

TECHNICAL PLASTICS
SHEETS • RODS • TUBES
FABRICATED PARTS

SYNTHANE

MOLDED LAMINATED
MOLDED MACERATED

SYNTHANE CORPORATION
South River Road, Oaks, Pa.

Please send me a copy of the complete Synthane catalog.

Name _____
Firm _____
Address _____
City _____ State _____

BARFITT—Identify by IEN - 3411 if you write the maker

REALOCK FENCE

Provides Permanent Property Protection

Let a bumper proof, weather-resistant Realock ® Chain Link Fence protect your property from arson, theft, trespassing and other hazards.

We make and install various types of Chain Link Fencing for the protection of industrial, institutional and residential properties. Write for catalog and free estimate.

Nationwide service. Consult classified phone book for nearest distributor or write our nearest division listed below.

Realock fence

WICKWIRE SPENCER STEEL DIVISION
307 DELAWARE AVENUE BUFFALO 2, NEW YORK
THE COLORADO FUEL AND IRON CORP.
CONTINENTAL OIL BUILDING DENVER 2, COLORADO
THE CALIFORNIA WIRE CLOTH CORP.
1000—19TH AVENUE OAKLAND 6, CALIFORNIA

BRANCHES & DISTRIBUTORS IN KEY CITIES EVERYWHERE

BARFITT—Identify by IEN - 3412 if you write the maker

Atkomatic Valves

Electrically Operated

★ Whether you use solenoid valves in your plant or as part of your product, you'll find the right valve in the ATKOMATIC line. These sturdy, compact valves are built in a wide selection of types for pressures up to 3000 pounds. Thousands of ATKOMATIC users find that they assure smooth, trouble-free operation over a long period. Write today for facts about ATKOMATIC.

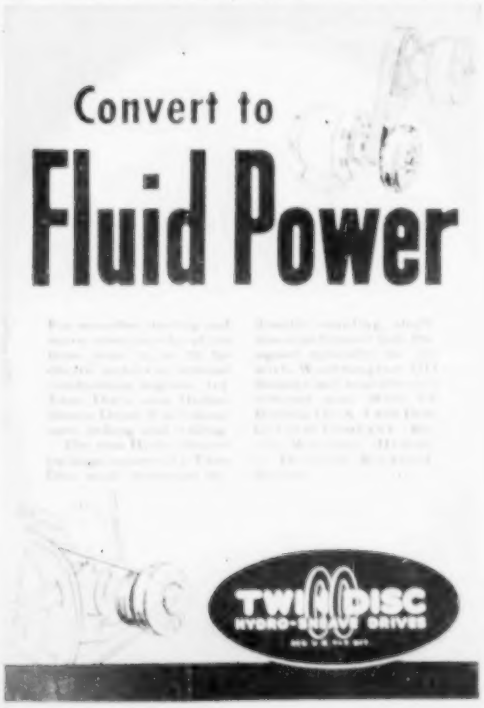
ATKOMATIC VALVE COMPANY, INC.
1935 ROOSEVELT AVE. • INDIANAPOLIS 7, INDIANA

Send for Literature

BARFITT—Identify by IEN - 3413 if you write the maker

Convert to

Fluid Power



BARFITT—Identify by IEN - 3414 if you write the maker

CASTER . . Swivel design, pipe threaded top plate, ¾ or 1 in.

Source: MIDWEST PRECISION CORP.
305 Hillsdale St., Jackson, Mich.

Series PT is a new line of casters with cast steel wheel, top plate threaded for ¾ or 1 in. pipe, a forged yoke housing steel fork and a wheel mounted to specification in metal or non-metallic materials. A unit with a 4-in. wheel and wheel measures 5⅝ in. in overall height, weighs 6½ lb. and rates 400 pounds. One with a rubber tire molded on metal to make an 8-in. diameter and 10½-in. overall height weighs 14 lb. and rates 800 pounds. Bearings in swivel and wheel carry Zerk alemite fittings. Brakes can be specified as left, movements.

BARFITT—Identify by IEN - 3415 if you write the maker

WOOD WORKING . . Auger bits for power drive, 13 sizes ¼ to 1 in.

Source: MIDWAY TOOL CO.
50 Industrial St., Melvin, Ohio

Clear thrust for free chip disposal characterizes new line of turpentine auger bits developed for power drive as in the spindle of a machine or the chuck of a portable tool. Each has the company's Mirror Finish rust-resistant finish.

BARFITT—Identify by IEN - 3416 if you write the maker

TRUCK . . Caster mounted basket unit for loads to 1,000 lb., can be stacked

Source: DONALDSON CO.
664-68 Pelham Blvd., St. Paul 4, Minn.

Tier Truck is a new basket-type truck made with expanded metal sides and ends in a structural frame designed for stacking and for handling with a fork truck. The unit is mounted on two rigid casters and one swivel unit to permit rolling to a work position. Dimensions are 48 by 30 by 82½ inches. Volume capacity is 25 cubic feet.

All Makers of These and All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 10

BARFITT—Identify by IEN - 3417 if you write the maker

LIFT 3000 POUNDS 10 FEET IN 1⅔ MINUTES

with a Yale Worksaver tilting fork electric truck

• Smooth hydraulic telescopic lift does the job. Truck picks up great loads — lifts them back-ward 21" for maximum load stability in travel.

• Saves time and money — reduces handling to a more "start-and-stop" operation.

• 63 models for factory and warehouse use. 68" model shown. Straight uses and motor trucks to the roof.

• Capacities: 2,000 lbs. up to 3,000 lbs.

Write for Literature.

YALE — THE YALE & TOWNE MANUFACTURING CO.
Roosevelt Boulevard • Philadelphia 15, Pa.
HAND LIFT AND POWER TRUCKS • HAND AND ELECTRIC HOISTS • INDUSTRIAL DIAL SCALES

BARFITT—Identify by IEN - 3418 if you write the maker

"There are more Trabon automatic systems in operation than all other makes!"

TIME TELLS! Trabon has had 25 years of experience in engineering and installing lubrication equipment.

ONE INDICATOR at the pump — assuring the proper measured amount of lubricant to each point SEALED — operates efficiently when buried under dust, dirt, coal, water, or grime.

Trabon has an oil or grease system for any type or size machine. Can we write today.

Trabon Engineering Corp., 1414 East 40th St., Cleveland 3, Ohio.

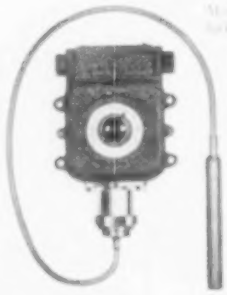
Trabon

OIL AND GREASE SYSTEMS

BARFITT—Identify by IEN - 3419 if you write the maker

TEMPERATURE CONTROL

Operates in five ranges of 150, 350, 450, 650 & 1000 deg. F.



Model 6. Temperature control for baking ovens, air heaters, plastic molding presses, soft metal melting pots and similar devices heated by gas, electricity or oil. Calibrated and uncalibrated models for five temperature ranges: 150, 350, 450, 650 and 1000 deg. F. Equipment includes thermostatic element with 5 ft. of capillary tubing. Longer tubing to specification.

The control unit contains a Micro switch with normally-closed, momentarily-open or single-pole double throw contacts. On the housing face is a temperature-setting knurled knob and personally-numbered dial. Conduit connection is on top of the housing. The cover, front and sides can be removed without disturbing wiring or wiring. Overall dimensions are 6 in. in height by 3 in. in depth.

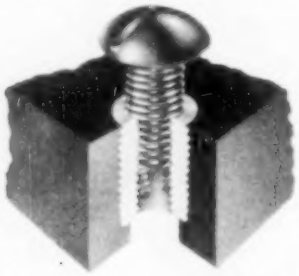
Current element capacity is 300 watts ac, 30 watts dc. The thermostatic element is interchangeable, can be replaced on the job, and is furnished for a variety of applications.

List price for two-wire design is $40 to $47 for uncalibrated element ranges, $45 to $52 with calibrated elements. The 3-wire design ranges from $45 to $52 and from $50 to $57.

Send for Bulletins 505-I and 505-J

THE PARTLOW CORPORATION
4 Campion Road New Hartford, N. Y.

BARFITT—Identify by IEN - 3420 if you write the maker



TAP-LOK INSERTS

Put a tap-lok into threads into all types of plastics, wood and soft metals for increased shearing strength when screws, bolts, studs, etc. are used for step-loads. Self tapping segments securely lock inserts and screw fasteners in cored or drilled holes.

TAP-LOK INSERTS Promote Efficiency and Savings

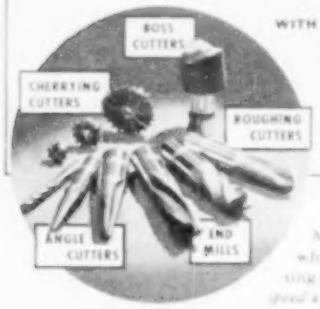
Eliminate fastening problems with Tap-Lok Inserts and obtain stronger assemblies, vibration-free and tamper-proof.

GROOV-PIN CORP.
2017 KERRIGAN AVE.
UNION CITY, N. J.

REPRINT—Identify by IEN-3421 if you write the maker

FASTER FEED...LOWER COSTS!

More Work between Grinds



WITH **T-J** CUTTERS

T-J Die Sinking Milling Cutters "have what it takes" for cutting tough die steels with speed and accuracy! They're extra sturdy — hold a sharp edge longer — less breakage! Made from a standard, extremely high grade steel — properly machined — scientifically heat-treated and accurately ground. Wide range of styles and sizes — ready for your tough jobs! Send for new catalog. The Tomkins-Johnson Co., Jackson, Michigan.

FOR TOUGH JOBS SPECIFY T-J

TOMKINS-JOHNSON
DIE SINKING MILLING CUTTERS

REPRINT—Identify by IEN-3422 if you write the maker

Better Built HEAD & EYE PROTECTION • WELDING & CUTTING EQUIPMENT

DOCKSON GOGGLES are correctly designed to give the utmost in comfortable and specific protection. Goggles for any hazard. Built for Better Service. Series 60 Monelite Chippers' Goggle shown.

DOCKSON FACE SHIELDS are featherweight but engineered for utmost safety and durability. Adjustable without slipping or sticking. Series 1120 shown, and 15 other models. Built for Better Service.

DOCKSON WELDING HELMETS AND HANDSHIELDS are dependably tough, easy to wear and instantly adjustable. Leak proof seams and Federal Specifications plates insure utmost safety. No. 1250 Turretype Helmet shown.

DOCKSON WELDING AND CUTTING EQUIPMENT includes combination outfits, welding and cutting torches, attachments, gauges and all accessories. No. 145 Hi-Speed Welding and Cutting Outfit shown.

THERE IS A DOCKSON DISTRIBUTOR NEAR YOU. NAME ON REQUEST. Send for new catalogs on the complete DOCKSON line.

Dockson CORPORATION
3839 WABASH • DETROIT 8, MICHIGAN

REPRINT—Identify by IEN-3424 if you write the maker

TRUCK . . Electric platform unit rates 1 ton, for general utility use

Source: BAKER INDUSTRIAL TRUCK DIV.
1248-52 W. 80th St., Cleveland 2, Ohio

Hustler Type FB is a new battery-powered platform truck with three speeds forward and reverse and controls centering in a contactor, controller and foot switch. The truck can be started after the foot switch is held down and the contactor is in first speed. Power is shut off when the operator shifts his foot to apply the foot brake. The arrangement promotes safe operation in giant aisles and runways.

The operator rides in a formed and padded seat on the battery housing which is placed to one side to permit handling of long overhanging loads such as lengths of pipe or structurals. Overall length is about 100 inches. Load area is 20 square feet. Platform height is about 18 inches.

REPRINT—Identify by IEN-3425 if you write the maker

SEALING . . Caulking material is a non-drying pliable ¼ in. cord

Source: ARNAUD CORP.
17 John St., Room 1408, New York 7, N. Y.

List is $10 per spool

Arnu-Cord trade name new 1/4-in. cord that has been saturated with a miniature pencil was suggested recently as substitute against tin, rubber, lanolin. The user cuts the cord to desired length to pick crevices, operates around windows, doors. The cord is of 100 ft. lengths on 7-lb. spools.

REPRINT—Identify by IEN-3426 if you write the maker

CALCULATING . . Thermal slide rule shows expansions of dissimilar metals

Source: WEBBER GAGE CO.
12913 Triskett Road, Cleveland 11, Ohio

List price is $1 for a new tool known as the Webber Thermal Comparator to provide length readings for aluminum, brass and carbide when gaged with steel precision blocks and for aluminum, brass and steel when gaged with carbide blocks. The reading shows difference between blocks and work at various shop temperatures so differences in expansion can be taken into account and work made larger or smaller by the correct amount.

Readings are based on the known coefficients of expansion in millionths of an inch per inch of length per degree F. for each of the materials. The rule is supplied without charge with purchase of gage blocks sold by the company.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER — Description — Ratings — See Page 38

REPRINT—Identify by IEN-3427 if you write the maker

PRECISION *Control*

by POWERS

IMPROVES PRODUCTION • LOWERS COSTS

End losses caused by cost and time heating of processes or operations requiring precise control. Install Powers air operated temperature regulators. Have automatic control helps to improve quality of product and speed up production.

WRITE FOR BULLETIN 370

THE POWERS REGULATOR COMPANY
3727 Greenview Ave. Chicago 14, Ill.
Offices in 50 Cities—59 years of Temperature Control

REPRINT—Identify by IEN-3428 if you write the maker

Buy a Better Bucket FOR LESS MONEY *Buy Brownhoist*

DIRECT FROM FACTORY TO YOU

• Brownhoist buckets cost less, they are sold direct from factory to customer, no dealer or jobber.

• Brownhoist buckets prove power saw of power or operation in dumping and building buckets for handling all types of materials.

• Standard — type supervised, power wheel and link type. Brownhoist buckets are available for immediate shipment.

Brownhoist

Write for illustrated catalog of Brownhoist Buckets

INDUSTRIAL BROWNHOIST CORPORATION
320 Washington Ave., Bay City, Michigan

REPRINT—Identify by IEN-3429 if you write the maker

IT'S A KNOCK-OUT PUNCH and it's HYDRAULIC

No Wrench to Swing! Faster • No Box Distortion
Close-Quarter Operation • Greater Safety

New! Punch combat operations in the local distribution boxes, pull boxes, etc. with smooth hydraulic power. Save time, at job time. Buy from leading supply houses. ECM you can't remember but here is a shortcut. Mix and match operations, low cost one series. Blackhawk Mfg. Co., Dept. F586, Milwaukee 1, Wis.

BLACKHAWK

REPRINT—Identify by IEN-3430 if you write the maker

AIR TOOLS

GREATEN your manpower..
SHRINK your costs..

AIR POWER

Ingersoll-Rand

REPRINT—Identify by IEN-3431 if you write the maker

Ohio plant cuts current 1/3 with G-E CAPACITORS

Where Standard Envelope Manufacturing Co. of Cleveland orders new equipment, switches overloaded, fuses blow. New wiring seemed needed, but investigation showed the culprit to be low power factor. Total current drawn by 500 motors, many only 1/2 hp., was 50% always more than need be!

G-E capacitors were installed, costing only $1,800. *Total current dropped one third*, production returned to normal, and existing wiring was found for expansion. And *they* received a bonus of about $28 a month from the power company for boosting power factor from 69.1% to 97%.

G-E capacitors relieve overloaded feeders to transformers and usually improve voltage. If your power network has a power factor or kw-demand clause, you may save extra money. Booklet GEA-3167 explains applications, gives actual histories. Write: *Apparatus Dept., General Electric Co., Schenectady 5, N. Y.*

GENERAL ELECTRIC

REPRINT—Identify by IEN-3432 if you write the maker

New GENERAL FILTER

for Hydraulic and Lubricating Oils

NO CARTRIDGES TO REPLACE

There are no expensive cartridges to throw away or stock. Entire unit is cleanable. First cost is only cost.

EASY TO CLEAN

Just remove one nut and all spacers and screens slide off. Wash in suitable solvent and replace. It's as simple as that.

FILTRATION TO SUIT EVERY APPLICATION

Write!

For prices and specifications. Describe your application.

This Model 1200 GENERAL FILTER can be made to filter solids from 340 mesh to 5 microns by varying the mesh of the filtering screen. Comes in two standard lengths, 8 inches and 4 inches, but can be made any length to provide capacity between 5 and 50 gallons per minute.

GENERAL FILTERS, Inc.
12890 WESTWOOD — DETROIT 23, MICH.

REPRINT—Identify by IEN-3433 if you write the maker

HOW WOULD YOU DO THIS SOLDERING JOB?

ANY SOLDERING JOB IS EASY with IDEAL Thermo-Grip

Sold through America's Leading Distributors

FREE TEST

IDEAL INDUSTRIES, Inc.
1108 Park Ave.
Sycamore, Illinois
Please send catalog data and arrange free demonstration of IDEAL Thermo-Grip

NAME
COMPANY
ADDRESS
CITY ZONE STATE

REPRINT—Identify by IEN-3434 if you write the maker

METER . . Electric panel instrument, with shock proof D'Arsonval movement

Source: MARION ELECTRICAL INSTRUMENT CO.
Stark St. Gate, Manchester, N. H.

Ruggedized [illegible] makes a line of electric meters to read in specified electric quantities and ranges in a new assembly that is not subject to breakdown under unusually severe conditions. The meters [illegible] up in sizes that include 2000 ft. lb. forces in each of three orientations, accurate operation for a period of six hours and handling in a compartmented barrel for one hour. Sizes in the line include 1½, 2½, 3½, 4½ in. and also the MR20 and MR30 Series. Each is interchangeable physically and electrically with existing JAN types.

The company has prepared an illustrated 12-page booklet, "New Marion Ruggedized" with construction and test explaining development of the new design, construction details.

REPRINT—Identify by IEN-3435 if you write the maker

PACKAGING . . Treated paper bags to protect contents against corrosion

Source: KENNEDY CAR LINER & BAG CO.
50 Modell St., Shelbyville, Ind.

Bags available to specification

Paper bags in a range of sizes and some from 4 by 10 in. to 12 by 6 ft. 6 in. are available in the new Vapor Phase Inhibitor paper through arrangement with the manufacturer of the paper, Vapor Corporation. The paper is impregnated with the chemical known as vapor phase inhibitor. The chemical slowly vaporizes from the paper, forms an invisible protective film over the bag contents to prevent corrosion.

REPRINT—Identify by IEN-3436 if you write the maker

HANDLING . . Jaw type stone grab, opens to 4½ feet, rates 5 ton

Source: WELLMAN ENGINEERING CO.
7002-6 Central Ave., Cleveland 4, Ohio

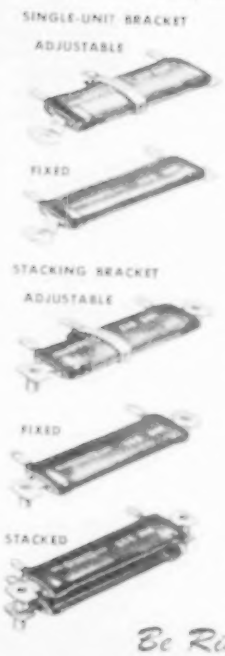
New grab [illegible] safely handled by a [illegible] crane [illegible] [illegible] [illegible]

IEN-3441

IEN-3442

PACK HIGHER WATTAGE INTO LESS SPACE

WITH OHMITE THIN RESISTORS



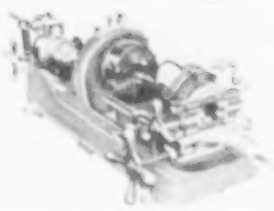
Be Right with OHMITE

RHEOSTATS • RESISTORS • TAP SWITCHES

IEN-3444

THREADING . . Motor driven machine for pipe from 1/8 to 2 in., two models

Source: BEAVER PIPE TOOLS INC. 200-300 Dana Ave., Warren, Ohio



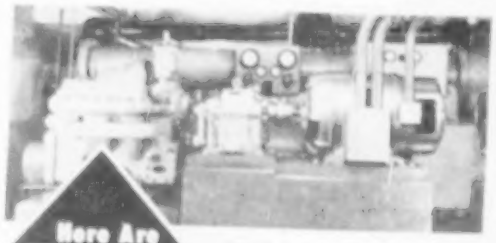
IEN-3445

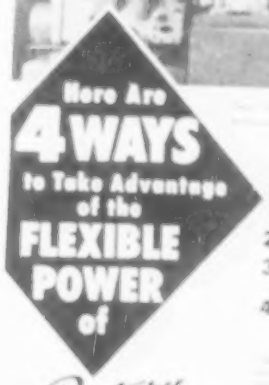
PLASTIC MOLDING . . Injection press rates 2 oz. of thermoplastic material

Source: VAN DORN IRON WORKS CO. 2663-67 E. 79th St., Cleveland 4, Ohio

IEN-3446

IEN-3447



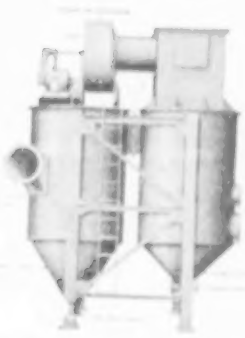


CENTURY ELECTRIC CO. 1806 Pine St., St. Louis 3, Mo.
Offices and Stock Points in Principal Cities

IEN-3448

IEN-3449

Reclaim Valuable Dusts with the Wet-Dry Type Hydro-Clone



WHITING CORPORATION
15629 Lathrop Ave.
Harvey, Illinois

FREE

▼ REPRINT—Identify by IEN-3450 if you write the maker ▼

NEW! LOW PRICED PRECISION MADE

MULTI-PURPOSE

CAM PRESS

• The perfect bench tool for cutting, coining, forming, line punching, beading, seaming, staking, riveting, coining

This sturdy press provides [illegible] with heavy arbor press. Ideal for small parts production [illegible]

Write today for special bulletin.

Bed 3½" x 4"
Die Space—Stroke up 4¼"
Length of Stroke ¾"
Capacity 1½ ton

PRICE ONLY
$42.00 F. O. B.
Marshalltown

MARSHALLTOWN MANUFACTURING CO.
MARSHALLTOWN, IOWA

▼ REPRINT—Identify by IEN-3451 if you write the maker ▼

GREATER

Speed
Safety
Savings
with

BAKER SCAFFOLDS

[illegible]

UL

BAKER-ROOS, INC.
602 W. McCARTY STREET
INDIANAPOLIS 6, INDIANA

▼ REPRINT—Identify by IEN-3452 if you write the maker ▼

NEW Ladon Bending Machine
Bends Wood Easily at Lower Cost

Amazing Variety of Shapes Produced in Revolutionary Way

FAST, SIMPLE OPERATION CUTS COSTS

[illegible]

WRITE TODAY for detailed information and literature

Midwest MANUFACTURING CO.
58 N. LACLEDE STATION RD.
ST. LOUIS 19, MO.

MANUFACTURERS OF BENDING MACHINES

▼ REPRINT—Identify by IEN-3453 if you write the maker ▼

HANDLING . . Rotary work aligner supports two cylindrical work pieces

Source: JOHNSON MACHINE WORKS
617-21 Menomonie St., Eau Claire, Wis.

Four frames carrying work supporting shoes are assembled on two bars running lengthwise of this new Work Aligner. The frames can be moved along the bars to meet given job requirements. Two work gauge rods can be mounted on the wheels for end alignment and can be rotated as in nutting operation.

Four models in the line have overall lengths from 70 to 138 inches. Load capacity is 1,000 pounds. Work diameter can range from ¼ to 24 inches.

▼ REPRINT—Identify by IEN-3454 if you write the maker ▼

POLISHING . . Portable electric tool mounts lamb's wool bonnet on 6 in. disc

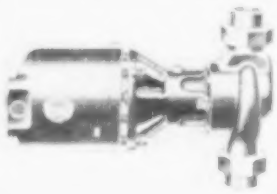
Source: CUMMINS PORTABLE TOOLS DIV.
4735-42 Ravenswood Ave., Chicago 40, Ill.

List price is $39 for this new universal portable electric tool to operate on 110-volt current. The tool weighs 4½ lb., rotates at 1,300 rpm. Free, is assembled in a durable aluminum housing. Rotating shafts are mounted in ball or roller bearings. Control comes at a trigger switch. Equipment includes a 6½-in. polishing bonnet and a container of suitable polish for metal, woodwork, linoleum surfaces.

▼ REPRINT—Identify by IEN-3455 if you write the maker ▼

PUMP . . Motor driven centrifugal for circulation in heating water lines

Source: H. A. THRUSH & CO.
23 E. Riverside Drive, Peru, Ind.



Six sizes are included in this new line of water circulating centrifugal pumps. The first three have 1, 1½ and 1½-in. suction and discharge with pipe connections. The second three have 2, 2½ and 3-in. connections [illegible]. The motor is mounted on the pump housing on suitable and [illegible] to fit a spring coupling to the pump shaft. Lubrication is sealed into the pump.

All Makers of These and All Other Products Are Listed in THOMAS REGISTER . . Descriptions . . Ratings . . See Page 50

▼ REPRINT—Identify by IEN-3456 if you write the maker ▼

FABREEKA

FOR IMPACT SHOCK, VIBRATION, AND NOISE

Under HEAVY MACHINERY

NO BOLTS

SAVES FLOORS AND FOUNDATIONS

Used "IN COMPRESSION"
Gives High Safety Factor
• GREAT STRENGTH — LONG LIFE
• NO TROUBLESOME PERMANENT SET
• CONTROLLED RESILIENCY
• EXTREMELY HIGH DAMPING
• GREAT STABILITY

SAVES INSTALLATION COST
No Bolts Needed When Used With Fabreeka Cement

[illegible]

SAVES MAINTENANCE
Less Metal Fatigue
Fewer Breakdowns
Less Down-Time
Less Upkeep

$ SAVES MONEY $

Used In Industry Since 1924

GET Your COPY

FABREEKA PRODUCTS COMPANY
INCORPORATED
222K SUMMER ST., BOSTON 10, MASS.

▼ REPRINT—Identify by IEN-3457 if you write the maker ▼

5 WAYS A BETTER BUY

1. Maximum head contact
2. Head perfectly concentric with body
3. Burnished threads - class 3 fit
4. Flush head surfaces
5. Non-slip hex wrenching

Allen

FLAT HEAD CAP SCREWS

In 95 standard sizes, NC and NF threads from leading distributors everywhere. Ideal for heavy duty fastening of thin plates, strips, moldings and sheet metal parts. Write factory for full information.

WARNING
Allen Type screws aren't necessarily Allen-Made unless genuine "Primed Finished" Allen Head screws in Mill Stock and other box.

ALLEN ALLEN HEAD
MANUFACTURING COMPANY
Hartford 2, Connecticut, U. S. A.

▼ REPRINT—Identify by IEN-3458 if you write the maker ▼

Speer carbon brushes provide dependable commutation . . . the utmost freedom from overheating, sparking, excessive wear and energy losses. Result—peak motor performance . . . a vital factor in the economical operation of electrical lift trucks. And, equally important, no costly material handling delays.

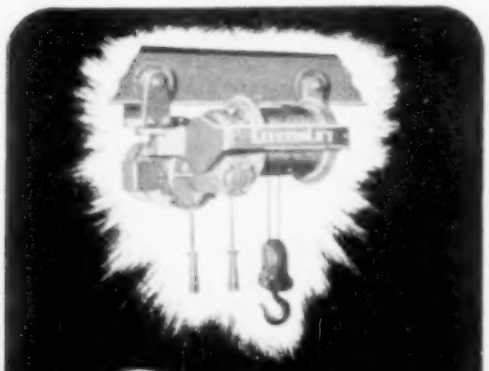
These brushes are only one of the many types that Speer has developed to match mechanical and electric service characteristics. For more than 50 years Speer's experience in meeting brush requirements of machine design or maintenance is at your service.

Speer
CARBON COMPANY
ST. MARYS, PENNA.

brushes • contacts • welding electrodes • graphite anodes • [illegible] discs • packing rings • carbon parts

CHICAGO / CLEVELAND / DETROIT / MILWAUKEE / NEW YORK / PITTSBURGH

▼ RARITY—Limited by IEN-3460 if you write the maker ▼



ELECTROLIFT saves handling costs because it uses little power, requires less labor and does the job quickly. Many users report this worm-drive electric hoist saves them more than enough money to pay for its installation. There's an ElectroLift model to meet your capacity (up to 6 tons), speed and plant layout needs. Write or phone your nearest ElectroLift representative — listed in the classified directory — or:

ELECTROLIFT, INC., 30 Church Street, New York 7, N. Y.

▼ RARITY—Limited by IEN-3461 if you write the maker ▼

SEMI-LIVE SKIDS

Typical Ironbound Money-Savers

• Short-haul units for stacking loads up to 2,500 lbs. safely and easily. Made of new hollow steel and seasoned hardwood. Bolted construction allows replacement of deck. A short haul system is comparatively inexpensive. Increase is low. Lift jacks will service many skids.

• This semi-live unit has permanently attached box top. Can also be made with removable top or bottom, just the if required.

• Semi-live unit with stake pocket and removable side racks. Available also with end racks, wood or pipe racks or open platform to meet individual requirements.

Bulletin 7-M illustrates these units.

IRONBOUND
BOX & LUMBER COMPANY
50 HOFFMAN PLACE • HILLSIDE N. J.

SKIDS • SEMI-LIVE SKIDS • DOLLIES • FLOOR TRUCKS

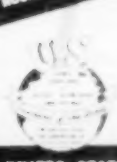
▼ RARITY—Limited by IEN-3462 if you write the maker ▼

SAVE MONEY STOP AIR LEAKS

WITH *Original* **BOWES couplings**

PRESSURE SEATED
AIR VALVES
NIPPLES-FITTINGS-BLOW GUNS

ALL YOUR AIRLINE REQUIREMENTS AT ONE SOURCE. SEE YOUR SUPPLY HOUSE SALESMAN



...Write for new catalog describing complete line.

THE UNITED STATES AIR COMPRESSOR COMPANY
5300 Harvard Avenue Cleveland 5, Ohio

▼ RARITY—Limited by IEN-3463 if you write the maker ▼

CLAMP . . Cast aluminum C-frame. Acme threaded brass screw, 1 to 8 in.

Source: FOSTER ALUMINUM ALLOY PRODUCTS CORP.
49 Industrial St., Forestville 26, N. Y.

No. 300 for [illegible] No. 302 [illegible] and No. 306 [illegible] Choice [illegible] Clamps with [illegible] screw drives and brass screws. No. 300 is to [illegible] opening, [illegible] from 2½ to 4 in. with thread diameters from 1⅝ to 2 inches. No. 302 is in six openings from 1 to 8 in. with thread from 1⅝ to 2½ inches. No. 306 is in six openings from 1 to 8 in. and thread from 2½ to 4½ inches. List price range from $10 to $40 per dozen.

▼ RARITY—Limited by IEN-3464 if you write the maker ▼

BRONZE . . Free machining alloy in rod and bar stock, sheet, strip

Source: RIVERSIDE METAL CO.
3 Pavilion Ave., Riverside, N. J.

Copper	92%
Tin	4%
Lead	4%

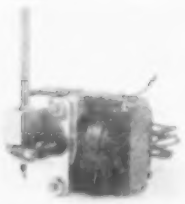
Mixture 41 is a new bronze alloy that is high in hard rubbing, suitable for bar and has a machinability rating of 60 per cent compared to free-cutting brass as 100 per cent or Grade B phosphor bronze at 50 per cent. High cutting speeds can be applied without danger of burning or scoring the cutting tools. Melting point is 1,607 deg. F. Density is .321 lb. per square inch. Electrical conductivity is 16 per cent IACS at 68 deg. F.

Rounds are available in .187 to 4½ in. diameter and in 12 ft. in maximum length; in 1½ to 3½ in. diameter square rod from 36 to 12 ft. in with length increments of 12 ft. in stock rods. Hexagon rods from ½ to 3½ in. with 12 ft. maximum length and ½ inch.

▼ RARITY—Limited by IEN-3465 if you write the maker ▼

MOTOR . . Miniature worm drive unit for vending machines, animated displays

Source: GLEASON AVERY INC.
1948 Auburn Ave., Auburn, N. Y.

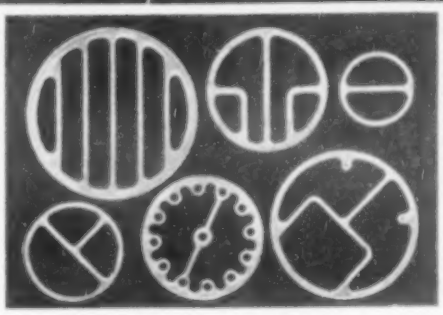


New assembly is supplied for the company's for specification for such application was range of output speeds between 20 and 100 rpm. Temperatures are considered for the speed of the output shaft. The assembly shown is the Gleaseldrive operation at 42 rpm. on 110 volt, 60 cycle a.c. It weighs 20 lb. The shaft extension from the [illegible] shaft diameter is ⅜ inch. Overall dimensions are 7 inches by 6½ by 10½ inches.

All Makers of Units And All Other Products Are Listed in THOMAS REGISTER Department Ratings — See Page 56

▼ RARITY—Limited by IEN-3466 if you write the maker ▼

MELRATH GASKETS



FOR HEAT EXCHANGERS, CONDENSERS, CYLINDER HEADS

Style No. 20 (Special): Metal and asbestos double-jacketed gaskets for high temperatures and pressures. Made in any metal or shape to fit your needs.

"There's a Melrath Gasket for Every Purpose!"

MELRATH SUPPLY & GASKET CO., INC.
3501 MEMPHIS ST., PHILADELPHIA 34, PA.

▼ RARITY—Limited by IEN-3467 if you write the maker ▼

Electro-AIRMAT
serves you better 4 ways

Modern AAF Air Filter Combines Best Features of Both Electronic and Mechanical Filtration

1. Easy, Positive Maintenance — Automatic panel removal filter cleaning. Water-dust mixture is suspended and replaced quickly, with clean panel. Eliminates sludge removal and cleaning of collector drums.

2. Simplified Installation — No water supply needed, sewer drains or water-tight base required.

3. High Operating Efficiency — 85% to 90% cleaning efficiency at normal pressure expansion velocities.

4. Stops Dust Infiltration — Functions as mechanical filter when system is shut down to protect against dust infiltration due to "stack effect".

Write for Electro-Airmat Bulletin No. 203

AMERICAN AIR FILTER CO., INC.
335 Central Ave., Louisville 8, Ky.
In Canada: Darling Bros. Ltd., Montreal, P. Q.

AAF **ELECTRO-AIRMAT**
ELECTRONIC AIR FILTER

▼ RARITY—Limited by IEN-3468 if you write the maker ▼

Top Products In Every Line Cut Costs and Build Sales with AMERICAN PHILLIPS SCREWS

HOW THEY CUT COSTS. From vacuum cleaners to sanding machines, from trucks to office appliances and tourist lamps . . . manufacturers use American Phillips Screws to speed up production, stop spoilage, and cut unit-costs. For these modern fastenings banish tumbling, crooked driving and scarred surfaces . . . *cut assembly time as much as 50%.*

HOW THEY BUILD SALES. On any product, the crossed-grooves of American Phillips Screws is a "green light" to buyers who stop and look for an outward index of inward quality.

AMERICAN SCREW CO.
PROVIDENCE 1, R. I.
AMERICAN PHILLIPS *Screws*

▼ RARITY—Limited by IEN-3469 if you write the maker ▼

Bond STRUCTURAL STEEL CASTERS

Companions in Strength
for easy, efficient movement of materials

THESE Bond built for the job casters are all members of one family of structural steel casters. Each of the three series of swivel casters has a double ball race designed for easy turning and for equal distribution of the load. All four series are built to withstand heavy loads and sudden shocks, and are pressure lubricated for long service life.

Bond Catalog F-10 fully describes these and other Bond Truck Casters. We will be glad to send you a copy on request.

BOND FOUNDRY & MACHINE COMPANY
304 PENN ST., MANHEIM, PA.

IEN-3470

• There is a Square D Multi-breaker to meet virtually every requirement—exactly. All provide REPEAT PROTECTION—nothing burns out—nothing to replace. All are THERMAL (trouble-less) MAGNETIC for complete protection.

Write for Bulletin SA 590. Square D Company, 6060 Rivard Street, Detroit 11, Michigan.

SQUARE D COMPANY

DETROIT MILWAUKEE LOS ANGELES

IEN-3471

Handiest folding chair

for wherever employees sit down

For every industrial need—in cafeterias, recreation rooms, assembly rooms—this is the perfect folding chair! Safe—can't tip in use. No snagging, pinching, or rolling hands. Fold quickly and quietly. Light and compact, easy to carry and store. Find out the budget low. Write for full information.

Also with wood seat

American Folding Chair No. 41 with adjustable plywood seat—molded hardwood seat, durable, lacquered. Chair No. 41, upholstered in imitation leather.)

American Folding Chair No. 41

American Seating Company

GRAND RAPIDS 2, MICHIGAN
WORLD'S LEADER IN PUBLIC SEATING
Manufacturers of School, Auditorium, Theatre, Church, Transportation, Stadium Seating, and Folding Chairs
Branch Offices and Distributors in Principal Cities

IEN-3472

Not necessary for bolt to come through nut. Locking ring on bottom of nut.

Thread fit NOT important.

Vibration and shock will not work nut off—will only force locking ring further into bolt threads.

Bolt stretch, wear, moisture do not affect gripping power.

Up to softening point of the metal, high temperatures do not lessen locking grip.

Crushed locking ring prevents passage of grit and liquids.

Nut can be re-used many times.

Available in high thin cap or spanner designs.

SEND for TEST SAMPLES and CATALOG

An-cor-lox *Lock Nuts*

LAMINATED SHIM CO. Inc. An-cor-lox Division 2100 Dixwell Ave. Hamden, Conn.

AN-COR-LOX NUTS • SHIMS • SHIM STOCK • STAMPINGS

IEN-3473

TESTING . . Reciprocating machine stresses work repeatedly at 1,800 cps.

Source: BALDWIN LOCOMOTIVE WORKS
Paschall Post Office, Philadelphia 42, Pa.

Model SF-10-1 [illegible]

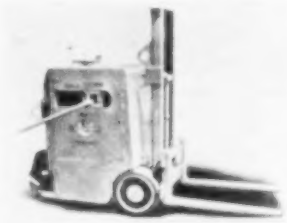
Calibrated springs [illegible]

Dynamic load [illegible]

IEN-3474

TRUCK . . Air driven fork lift unit for explosion proof operation in plant

Source: CRESCENT TRUCK CO.
1033-37 Willow St., Lebanon, Pa.



No danger [illegible]

The drive unit [illegible]

All Makers of Items And All Other Products Are Listed in THOMAS REGISTER Descriptions Ratings See Page 10

IEN-3475

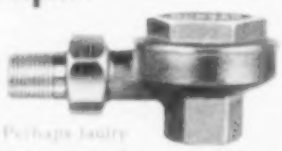
LITTELL Rack and Pinion Roll Feed (illustrated) with automatic center-ing Reel. Also LITTELL Single and Double Roll Feeds to fit any make or size press, either open-back inclinable or straight-side.

Write for Catalog

F.J. Littell MACHINE CO.
4133 RAVENSWOOD AVENUE, CHICAGO 13, ILL.

IEN-3476

are you caught in your own traps?



Does your heating system fail to kick out as much heat as you kick in for fuel? Perhaps faulty or worn-out traps are the cause of your troubles.

If so, it will pay you to check with Dunham—leading manufacturer of radiator, thermostatic, float and thermostatic, closed float, inverted bucket and return traps. Dunham's 47 years of leadership in the heating equipment field stand behind these products . . . assuring you long and efficient service. Write today for further information.

DUNHAM

HEATING MEANS BETTER HEATING

C. A. Dunham Co. 400 W. Madison St., Chicago 6, Ill. In Canada: C. A. Dunham Co. Ltd., Toronto. In England: C. A. Dunham Co. Ltd., London.

IEN-3477

Accurate, Instant Readings on all Speed Ranges . . .

Know Your "REVS" with STICHT TACHOMETERS

There's a Direct Reading Type for Every Purpose... or Job.

TYPE U HAND TACHOMETER

Type U Tachometers combine in one instrument five ranges such as 30-12,000 RPM, 45-18,000 RPM, 60-24,000 RPM, 120-48,000 RPM. Many other range combinations. Send for Bulletin No. 750 and condensed Tachometer Bulletin No. 1046.

Stationary Tachometers furnished to read RPM, Feet Per Minute, Yards Per Minute or to suit many other applications.

HERMAN H. STICHT CO., INC.
Tachometer Headquarters
27 PARK PLACE NEW YORK 7, N. Y.

IEN-3478

HOLTITE

SCREWS, BOLTS, NUTS and allied fastenings

Rugged, accurate and consistently uniform, HOLTITE precision-made fastenings are produced in all types, head styles, and finishes for ANY application in ANY material.

HOLTITE - Phillips Recessed Head Fastenings effect savings in time up to 50% and more. Power drivers can be safely used even on finished parts to speed assembling and eliminate marring of work and injuries to operators.

Send in your fastening problems. Our Engineering Staff will gladly study them and make recommendations for the most practical methods of reducing your costs. We have the most complete facilities for producing Special parts and fastenings.

CONTINENTAL SCREW CO.
New Bedford, Mass., U.S.A.

CALL YOUR DISTRIBUTOR

IEN-3479

SAVE on OPERATING COSTS and RENT with CARD *Sturdi-Lite* SAFETY LADDERS

EASY to move around. SAFE to work on handy shelf or basket at top. Amazing LIGHT WEIGHT but STRONG Nevale ALUMINUM construction, including hand rails. Sturdy one-piece steps, non-skid rubber treads. Ball bearing casters on two rear legs and front Swiveling Caster. Heavy coil spring keeps the two front rubber feet off floor until a person steps on ladder. Then they lower and rest securely on floor.

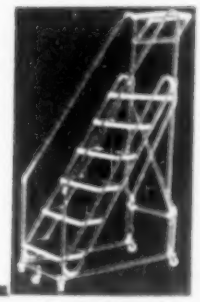
MANY Time Saving USES in factory assembly lines, machine repair work, stock, tool and file rooms, etc.

SAVE SPACE—avoid things HIGH in files, shelves, bins, lockers, etc. They're easy to get at with CARD SAFETY LADDERS.

For NARROW AISLES—18" width in 5-step, 8-step and 5-step with shelf or basket top.

For WIDE AISLES—24" width in 8-step, 5-step and 5-step with shelf only at top.

ALSO Extra Steps and Railings. Write



D. R. CARD COMPANY
National Distributor
520 MERCHANDISE BLDG.
MINNEAPOLIS 3, MINN.
Mfrs. BURD METAL PRODUCTS
Clearwater, Fla.

IEN-3480

PANGBORN Hydro-Finish

gives you . . .

- Better Paint Jobs
- Better Electroplating
- Better Finishing
- Better Products

Slash finishing costs to new bottom in your plant! Amazing Pangborn Hydro-Finish cleans far faster than hand methods, yet holds tolerances to .0001"! Hydro-Finish cannot harm your product's sharp edges or corners, forms a perfect "tooth" for non-peel electroplating, finishing or painting.

Hydro-Finish makes threaded parts turn easily . . . forms millions of little "oil pockets" in lubricated pieces to prolong product life. Fatigue failure is reduced because Hydro-Finish removes the tiniest grinding lines, too!

Hydro-Finish is also valuable in your tool room—cleans production tools and dies in a fraction of the time needed for expensive hand cleaning.

WRITE TODAY for Bulletin 1406. Contains full facts on Pangborn Hydro-Finish and Panglemite Abrasive. For your free copy, address: Pangborn Corporation, 1293 Pangborn Blvd., Hagerstown, Maryland.

Pangborn

BLAST CLEANS CHEAPER with the right equipment for every job

IEN-3482

FILTERING . . Powdered metal unit for 1/2 in. water line rates 10 gpm.

Source: OSCAR FISHER CO.
107-11 Worth St., New York 13, N.Y.

Cylindrical [illegible]

List price [illegible]

IEN-3483

GRINDING . . Portable electric tool, light intermittent duty, 110 volts

Source: DUMORE CO.
1251 14th St., Racine, Wis.

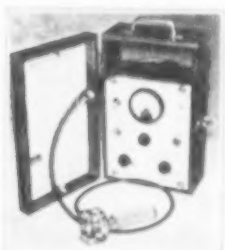
Universal motor [illegible]

Packaging [illegible]

IEN-3484

TESTING . . Moisture meter to check moisture content in lumber

Source: MOISTURE REGISTER CO.
131-5 N. Garfield Ave., Alhambra, Calif.



List price [illegible]

IEN-3485

for GREATEST DEPENDABILITY and EFFICIENCY in metered pressure pumping of

SULPHURIC ACID

at all concentrations

Pumps against low pressure . . . [illegible]

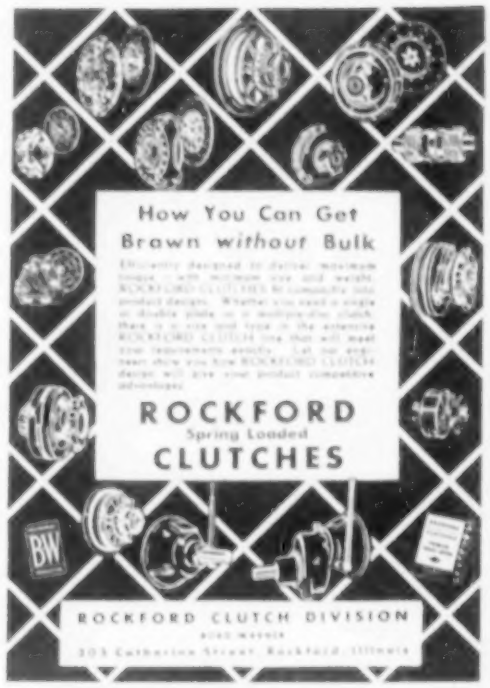
- NO STUFFING BOX OR RUNNING SEAL
- POSITIVE DISPLACEMENT PISTON MEASUREMENT
- FLOW RATE ADJUSTABLE WHILE IN OPERATION
- MANUAL OR AUTOMATIC CONTROL

Lapp PULSAFEEDER

PISTON-DIAPHRAGM CHEMICAL PROPORTIONING PUMP

WRITE for Bulletin 241 with complete description and specifications.
LAPP INSULATOR CO., INC. PROCESS EQUIPMENT DIVISION 233 MAPLE STREET, LOCKPORT, N.Y.

IEN-3486



IEN-3487

Severance DEBURRING CUTTERS HIGH SPEED CARBIDE

Unequalled for power and hand deburring. Sectional pattern teeth give shearing action

Severance INSIDE DEBURRING CUTTERS

Select 45° High Speed cutters from 24 standard sizes and 30° cut-ters from 33 sizes, from 1/8" to 3" diameters.

Both angles can be supplied in CARBIDE

Severance OUTSIDE DEBURRING CUTTERS

For speedy light deburring of rod ends and tubing O.D.'s, either off-hand or in screw machines. Select 30° cutters from 24 standard sizes and 45° cutters from 32 sizes—up to 4 inch diameter.

ANGLES 30° & 45° C.S.

Both angles can be supplied in CARBIDE

OUTSIDE CHAMFERING MILLS

Operate in machines to perform heavy chamfering without chatter. In above size range and angles.

HEADQUARTERS FOR DEBURRING AND CHAMFERING TOOLS DEVOID OF CHATTER

Severance HAND DEBURRING CUTTERS

"A Twist of the wrist" easily bites off the burr left by drill or punch.

Ten standard sizes for 1/8 to 2" diameters.

Write for Bulletin 14-D

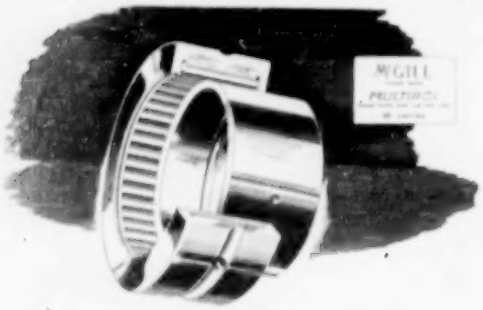
Complete REGRINDING Service . . . by New Tool Craftsmen . . . Savings are thus multiplied.

SEVERANCE TOOL INDUSTRIES, Inc.
740 Iowa Ave., Saginaw, Michigan

IEN-3488

Save Time with a **WHITING** CROSS-OVER BRIDGE

▼ BREFITT—Identify by IEN-3489 if you write the maker ▼



exclusive McGILL design provides

extra oil seal protection!

The exclusive design of McGill SE Series of MULTIROL Bearings not only increases load capacity and eliminates bone retaining rings, but also creates an unusual lubrication seal providing extra protection against destructive particles. A groove that retains lubricant is built in the inside diameter surface of the roller retaining end shoulder. This lubrication well, acting against inner race O.D., increases the sealing effect of the precision tolerances between these shoulders and the inner race.

Multirol SE Series Bearings in standard shaft sizes of ½ to 9½ inches are nationally used by nationally known users for precision performance and longer bearing life.

The SE bearings are but one of several Bearing Series built by McGill Manufacturing Company, Inc. Consult McGill engineers on your problems.

Write for Bulletin SE-47 McGill Multirol Bearings. Dept. 100-N Valparaiso, Ind. Lafayette, Ind.

McGILL precision bearings

▼ BREFITT—Identify by IEN-3490 if you write the maker ▼

• For the economical solution to wheel problems, use Gleason Standard Stock steel disc wheels "as is," or modified to fit product needs. Wide range of sizes, 4" to 18" diameters, tire treads and styles in solid, semi-pneumatic, or pneumatic rubber tires. Variety in bearings permits flexibility in standard stock wheels without sacrificing production economies. Gleason wheels bring lower costs to lawn mowers, garden tractors, hand trucks, portable service and material handling equipment of all types. Give product application, wheel loads, when asking for quotations and recommendations.

GLEASON CORPORATION 530 N. 9th St., MILWAUKEE 3, WIS.

GLEASON WHEELS FOR *Price Competitive* PRODUCTS

▼ BREFITT—Identify by IEN-3491 if you write the maker ▼

HERE'S A GOOD WAY TO

CUT YOUR FIRE FIGHTING COSTS

ROCKWOOD

TRIPLE-ACTION SG-48 WATERFOG NOZZLES

Lightweight

1. High velocity WaterFOG
2. Straight stream
3. Low velocity WaterFOG from extension applicator

Rockwood WaterFOG Nozzles will out-perform any other fog nozzles operating on either high or low pressures for all around fire fighting purposes.

Extinguishes fires in flammable liquids and ordinary combustibles faster and with less water.

Designed for use in industrial plants, chemical plants, oil refineries, mercantile and public buildings and municipal fire departments, etc.

Write for bulletin C-501R

ROCKWOOD SPRINKLER CO.
40 HARLOW STREET WORCESTER 2, MASS.

▼ BREFITT—Identify by IEN-3492 if you write the maker ▼

MOTOR . . Mounts electric brake on rear shaft extension, 1 to 60 hp.

Source: ELLIOTT CO.
49 Kealey St., Jeannette, Pa.

Crocker—Wheeler motor in drip-proof, splash-proof or totally enclosed design with double shaft extension and a new spring-set magnetic-released disc brake make up this new motor and brake assembly. It is available for operation on 110 to 500 volt 2 or 3 phase 50, 60 cycle ac. Motor frame sizes range from 270 to 365. In addition to the complete assembly, the company is prepared to supply the brake only for applications on suitable motors in the user.

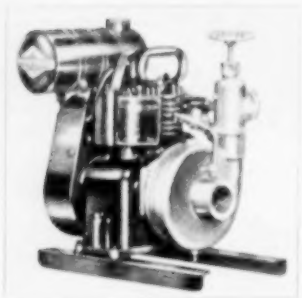
Eight ratings, based on the brake capacity, are 2 to 72 ft. lb. of torque. Flange diameter of the frame enclosing the brake is 11 and 13 inches. The mechanism consists of a splined wheel that mounts on the motor shaft to engage the rotating brake disks, the armature, the assembly and the magnet and springs. The magnets connect into the motor circuit so are when the circuit is closed and release the brake for operation of the motor. The magnets release to open circuit and permit the springs to set the brake. Features of the brake is its heavy-duty design that requires no service attention. The motor is featured by its factory lubricated and sealed ball bearings which also eliminate need for free air cooling.

Bulletin SE-610-L 4 pages, provides surveyed illustration of the complete assembly and of the brake alone, includes descriptions specifications, engineering data in and selection

▼ BREFITT—Identify by IEN-3493 if you write the maker ▼

PUMP . . Engine driven centrifugal, portable for utility use, to 200 gpm.

Source: W. S. DARLEY & CO.
2812 Washington Blvd., Chicago 12, Ill.



Model AE, No. 1, 4 and 7 are three-size engine-driven pumps designed for general utility application in portable service. The three rate 84 to 200 gpm. at 20-lb. pressure, can be operated against a total head of 170 feet. The pump encloses an impeller that will handle water with a considerable amount of included trash. It is self-priming on suction lift to a maximum of 20 feet.

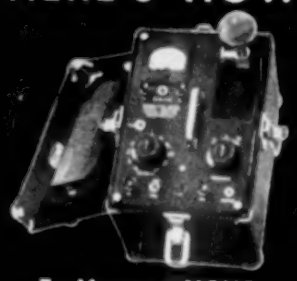
Smallest size weighs 57 lb. employs a 1½-hp. air-cooled Briggs and Stratton gasoline engine. The tank on the engine holds sufficient fuel for about 2 hr. of steady operation. The pump has 1¼-in. outlet, 1½-in. inlet.

Largest assembly weighs 150 lb. employs a 7-hp. Briggs and Stratton single-cylinder air cooled engine. Pump inlet and outlet connections measure 2½ inches.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . Descriptions . . Ratings . . See Page 56

▼ BREFITT—Identify by IEN-3494 if you write the maker ▼

HERE'S HOW



To Measure NOISE

Simply • Conveniently • Accurately

Thousands of G-R Type 759-B Sound-Level Meters are in use in industry for hundreds of different types of noise measurement. The Meter is direct reading from 24 to 140 db . . . covering the lowest practical level to that beyond a locomotive whistle. It can be operated by anyone . . . it is very valuable in measuring plant noise, product noise, analyzing and correcting excessive noise in equipment . . . comparing the effectiveness of sound-proofing materials. Its price . . . complete and ready to use . . . $320.00

WRITE FOR THE "NOISE PRIMER"

GENERAL RADIO CO.
Cambridge 39, Massachusetts
NEW YORK CHICAGO LOS ANGELES

▼ BREFITT—Identify by IEN-3495 if you write the maker ▼

MICROCASTING

Eliminates 15 machine Operations

AT 1/3 THE COST

This particular part is a cutting knife used on knitting machinery. It originally was made from a free machining alloy and was shaped, drilled, and ground. Fifteen machine operations were required. As the metal was extremely soft for the purpose of the part, replacements were heavy.

The Microcast Process of precision casting produced this same part with only a grinding operation required. Because the Microcast Process incorporated extremely all machining operations, it was practicable to utilize the extremely hard Stellite. The Metal for a longer life. This Microcast part was produced for ⅓ of the cost of the previous method.

WRITE FOR FREE BOOKLET

More complete information on the Microcast Process is contained in a new free booklet which is available. Write stating approximate size of the part, the quantity and the material and we will send you the booklet and a quotation on the cost of the new "Microcast" Write for this valuable booklet today!

PRECISION CASTINGS

MICROCAST DIVISION
AUSTENAL LABORATORIES, INC.
224 East 19th Street • New York 16, New York
715 East 69th Place • Chicago 37, Illinois

▼ BREFITT—Identify by IEN-3496 if you write the maker ▼

CAPCO DOCK COVERS OFFER YEAR 'ROUND PROTECTION

Can be installed inside or outside of dock door models for various purposes.

SOLD AT A LOW COST

. . . and the cost is especially low because it pays for itself many times . . . saves time and money over many years.

- PREVENTS ACCIDENTS
- ONE MAN CAN OPERATE
- FIREPROOF
- WATERPROOF
- DURABLE — LONG LIFE
- DEPENDABLE

BEAT THE BAD WEATHER

CAPCO Dock Covers completely enclose the space between car and building doorways, protecting loading and unloading during bad weather. Recommended by safety engineers. No more wet merchandise in the rain . . . no more interruption during winter. Here's your insurance against loss of either heat or refrigeration; you have practically the same as indoor loading.

CAPCO

Be sure to write for illustrated literature and prices.

622-24 PROSPECT AVENUE • KANSAS CITY 1, MISSOURI

RAFFITT—Identify by IEN-3498 if you write the maker

This building saves money 3 WAYS

The next time you build additional space, or portion-out Armco Drainage Buildings, save you money 3 important ways:

1. A low-cost-but-workmanlike one-coat finishing is a matter of hours. Valuable time is saved because Drainage Buildings come ready with structural support and finished surface.

2. You save now on maintenance. Armco Buildings are rust-resistant, fireproofed and approving only when properly galvanized. Almost all they ever cost is the maintenance cost of paint and even then you save money because the special Chemical-Resistant Steel takes paint readily and holds it long.

3. Changing conditions can be met economically with an Armco Building. It can easily be expanded with consistent paint, interrupted in the entire building can be dismantled and started on a new site without loss of material.

WRITE FOR THE COMPLETE MONEY SAVING STORY

ARMCO DRAINAGE & METAL PRODUCTS, INC.
4616 Curtis Street
Middletown, Ohio

RAFFITT—Identify by IEN-3499 if you write the maker

SEWALL GEARS

CUSTOM MADE for EVERY NEED

For best results, get in touch with Sewall engineers while your product is still on the drawing board. Close tolerances are efficiently maintained in the production of racks . . . sprockets . . . spur . . . spiral . . . bevel . . . Zerol bevel . . . worm gears. We furnish prompt estimates on any quantity.

STOCK SPROCKET CATALOG ON REQUEST

E. B. SEWALL MANUFACTURING CO.
686 Glendale St. St. Paul 4, Minnesota

RAFFITT—Identify by IEN-3500 if you write the maker

FOTO-FLO MODEL C PHOTO-COPYING MACHINE

New! Speedier! More Economical!

DAYLIGHT OPERATION NO DARKROOM REQUIRED

Makes 3 (18" x 24") Prints a Minute of anything written, printed, drawn or photographed

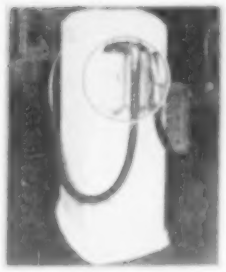
WRITE DEPT. 50-65

HALOID THE HALOID COMPANY ROCHESTER 3, NEW YORK
Branch Offices in Principal Cities
Photocopy Papers • Photo-copying Machines • Photographic Papers

RAFFITT—Identify by IEN-3501 if you write the maker

FILTERING . . Twin element assembly for pump dispensing gasoline, fuel oil

Source: COMMERCIAL FILTERS CO.
16-20 W. Third St., Boston 27, Mass.



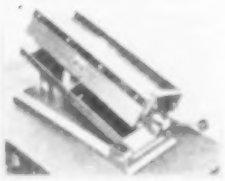
Flow rate is 10 gpm and expects prior to replacement of the cartridge type. Filtering element in this new attachment filter is about 10,000 perforations. The unit assembles on a pump dispensing gasoline or fuel oil diesel oil to remove solid particles, rust, sludge, silica, grit and carbon-forming impurities and also other impurities which flow to the pump in water.

The element is made by winding a perforated coarse outline sheet of soft textile around 12 open metal supporting cores.

RAFFITT—Identify by IEN-3502 if you write the maker

CHUCK . . Permanent magnet design mounted on universal sine plate base

Source: OMER E. ROBBINS CO.
5720-24 Twelfth St., Detroit 7, Mich.



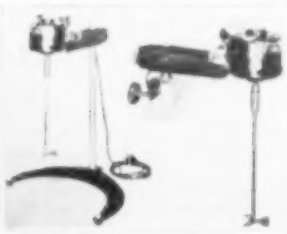
Macra Sine A-20 designates the permanent magnet chuck measuring 2½ in. in overall chuck length by 7½ in. in width. The chuck is mounted on a flat-plate base for accurate positioning in the Model A-20. It is on a sine plate for parallel and single-angle work in Model B-20.

Overall base dimensions are about 24 by 8½ inches. Height is 6¾ in. in A-20 and 5¾ in. B-20. Principal application is in positioning and holding work on the table of a production surface grinding machine.

RAFFITT—Identify by IEN-3503 if you write the maker

MIXING . . Motor driven impeller in stand and bracket support assembly

Source: DAYTON ROGERS MFG. CO.
2822-26 13th Ave. S., Minneapolis 7, Minn.



Motor rating is ⅓ hp and speed is 1,550 rpm. In this new impeller type mixer. The motor is mounted on a support arm in hinged arrangement to permit tilting through a 45-deg arc. The impeller and shaft are made of stainless steel. Overall height is 15 inches. Operation is on 110-volt 60-cycle ac. Weight without the supporting stand is 12 pounds.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . Descriptions . . Ratings . . See Page 50

RAFFITT—Identify by IEN-3504 if you write the maker

Welding is smoother with "FLEETWELD 5"

HAVE you used "Fleetweld 5" yet? . . . or asked to see the "Hobarts" of welders when you going day? If you said "I don't know" to either, why not do it? . . . Do it now!

This was performed in well over 100 shops, from small to very large, from coast to coast, from Canada to Cuba. Fleetweld welding. Electrodes, wire, a fine welder.

Fleetweld 5 . . . your best a homogeneous, more uniform metal . . . The welds will not crack. They are completely ductile even when welded on old steel. Welds are as strong as the base metal. Welds are as good as the base metal. Welds are as good as the base metal. Welds are as good

IEN-3508

SHEARS UP TO 1/8" STOCK

CUTS UP TO 5/16" RODS

• Here's another Henrich handyman for the shop . . . Model 1 Shear . . . a tool that cuts flat stock up to 1/8" thick, and round stock up to 5/16" in diameter. All steel construction. This tool can be bench-mounted, or, if portability is desirable, provision is made for clamping in a bench vise.

SEND FOR FREE HANDNIB FOLDER

NATIONAL MACHINE TOOL CO.
DEPT. 170-B, RACINE, WISCONSIN

IEN-3509

ABRASION PROBLEM?

Get the facts about THERMALLOY* HI-250, the abrasion resistant alloy that is outlasting other materials 2 to 1 in many applications. Write for Bulletin L-176, giving advantages, properties, suggested applications. Electro-Alloys Division, 1949 Taylor Street, Elyria, O.

*Reg. U.S. Pat. Off.

AMERICAN Brake Shoe COMPANY — ELECTRO-ALLOYS DIVISION, ELYRIA, OHIO

IEN-3510

PROTECT YOUR PRODUCTS DURING SHIPMENT with

IEN-3511

ELECTRIC CONNECTOR . . Test jack for panel assembly in a laboratory

Source: FLEXILAB PRODUCTS CO.
4943-47 Colorado Blvd., Denver 16, Colo.

No. 721 is a one-one-lock, or constricted sleeve, to apply to a vertical panel for electrical connection to equipment on front or the rear. The lock saves the previously developed No. 721 base plug to complete a connection. The plug, also shown in the illustration, serves as a removable socket lock of the screw-connecting, which is which an adjustable lock can be plugged when voltage connection is required through the one lock. Terminals and adapters are of the standard. Molded parts are polyethylene plastic, as used in black adapts.

IEN-3512

PAINTING . . Rubber base material for product and exterior maintenance

Source: ACE LABORATORIES
1612-20 Coutant Ave., Lakewood 7, Ohio

Serves as primer or finishing coat

Item Ban is a new paint available in super form and in metal cans and packaged in 1 to 50-gal. containers. It applies by brush or spray, is intended for protection of exterior work and exterior surfaces. It forms a film that is resistant to attack by acids, alkalis, chemical fumes, moisture, salts, alcohol. The film dries to touch ½ hour. It will not crack, crack or peel. It can be reduced by addition of ordinary turpentine. Allowance is available to match or produce special paint applications, as wood, masonry, composition.

IEN-3513

INSULATING . . Flexible tube unit to absorb vibration as at a compressor

Source: TECHNIFLEX CORP.
53-57 Jersey Ave., Port Jervis, N. Y.

Two tube sections, coupling with metal bend connection and clamps, are assembled with all steps fitting as they now stock assembly capacity. The unit can have designed specifically for refrigerant compressor. It is available in specified materials and in seven tube sizes from 1/4 to 1 inches.

Leg length measured equal and varied in 14 to 30½ in low. Pressure capacity is usual bend construction is 200 lb. on standard pressure and 200 lb. on bending pressure for the 2½ size.

All Makers of Items And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 10

IEN-3514

READINGS AT A GLANCE

for BOTH AC and DC

Instant Current Measurements Without Breaking Circuit or Insulation . . .

You can read the low and accurately with the Columbia Tong Test. An device for quickly clamping the tongs around the electrical conductor. Tong Test is the only instrument of its kind that measures both AC and DC. Current Scale and Ear is for use in readings AC, conductor and Cable is straight from changeable with clamp up to 1000 amperes. The tongs is accommodates cables up to 2½ in. diam. up to 4½ in. Voltage readings are with the optional Attachment.

Write for Tong Test Bulletin TQ-400

COLUMBIA ELECTRIC MFG. CO.
4519 Hamilton Ave., Cleveland 14, Ohio

IEN-3515

NO TIME LOST "WONDERING" HOW TO USE THIS EXTINGUISHER!

Anybody can get a Randolph into action FAST! No valves to turn, no nozzle to adjust, just point and press your thumb! Randolph's snow CO2 is non-damaging, evaporates without a trace. It's non-toxic, won't conduct electricity, or deteriorate or freeze.

Underwriters Approved

Learn how Randolph gives your plant better protection for less money! Write for full facts.

RANDOLPH LABORATORIES, INC. 6 E. RINZIE STREET, CHICAGO 11, ILLINOIS

IEN-3516

nyb General Purpose FANS

Capacities from 400 CFM to 18,000 CFM.

Portable, self-contained units for Class I industrial and ventilating applications. Recommended for their ease of installation, low maintenance and space saving features. Made in three types and eight basic sizes. Both direct connected and belt driven models.

Laboratory tested, accurately rated and fully guaranteed in strict accordance with Standard Codes.

Write for Bulletin 491

THE NEW YORK BLOWER COMPANY
GENERAL OFFICES • 3180 SO. SHIELDS AVE. • CHICAGO 16
FACTORIES AT LAPORTE, IND. AND CHICAGO, ILL.

IEN-3517

Chicago "Safety Plus" Socket Screws make your product better 4 ways

• THEY'RE STRONGER
• THEY GO FARTHER
• MORE ACCURATE
• THEY COST LESS

Socket Head Cap Screws • Socket Set Screws • Shoulder Bolts • Square Head Dog Point Set Screws • Socket Plug Plugs • Keys • Hexagon Head Cap Screws, Small and Brass • Square Head and Modified Cup Point Set Screws • Polished and Fine Head Cap Screws • Taper Pins • Metal Plates • Square Head and Hexagon Nuts, Small and Brass • Hexagon Coupling Nuts

The CHICAGO SCREW COMPANY
5525 WASHINGTON BLVD. • BELLWOOD, ILL.
Established 1872

IEN-3518

STURDY, CONVENIENT, LOW-COST

JIFFY *ALL METAL* **CABINETS**

FOR SMALL PARTS, DRILLS, TOOLS, CARBIDE TIPS AND MOUNTED POINTS

32 DRAWER UNIT • DIVIDES INTO 96 COMPARTMENTS **$8.95**

POSTAGE PAID

64 DRAWER UNIT • DIVIDES INTO 192 COMPARTMENTS **$15.95**

Rustproof Aluminum Drawers

Complete set of Dividers and Index Cards supplied

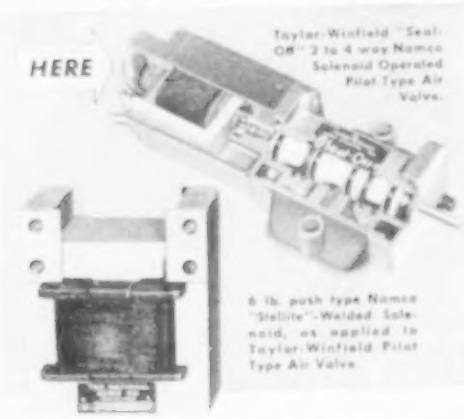
APPROXIMATE SIZES
DRAWER: 1¼" Deep, 2⅞" Wide, 6" Long
32 DRAWER UNIT: 6" Deep, 12¼" Wide, 15¼" High
64 DRAWER UNIT: 6" Deep, 25½" Wide, 15¼" High

Spot welded steel cabinet, metal flange drawer guides, enamel finish and solid one-piece aluminum drawers in natural satin finish. The first multiple drawer metal cabinet for convenient storage of small parts, drills, tools, carbide tips, mounted points, or assembly bench work on soft or low cost. Order now for immediate delivery. Send check or money order or rated companies shipped on receipt of purchase order.

KAYTEE PRODUCTS
DEPT. L - BOX 588 - CANTON, OHIO

IEN-3519

FOR FAST, DEPENDABLE SERVICE



NAMCO HEAVY-DUTY SOLENOIDS
are the exclusive choice of
the TAYLOR-WINFIELD CORPORATION

The Taylor-Winfield "Seal-Off" 2 to 4-Way Namco Solenoid Operated Pilot Type Air Valves are designed to actuate air operated tools and fixtures on resistance welding machines, presses and the like, and have proved their superiority on a wide variety of high-speed, heavy-duty applications.

Namco "Stellite" Welded Solenoids were selected for this valve and other solenoid valves in the Taylor-Winfield laboratories at Warren, Ohio. This Company further states: "Use low current demand of the Namco Solenoid permits control of the valve by electronic monitoring time delay of microseconds."

If you build a product where compact, trouble-free Solenoid control, dependable low operation, and low current consumption are important, then contact Namco "Stellite" Welded Solenoids engineered for your specific application. We will be glad to help you improve your product.

Complete standard range of Namco "Stellite"-Welded Solenoids are illustrated and tabulated in Engineering Bulletin EM-46A. Ask for your copy.

ELECTRICAL MANUFACTURING DIVISION

THE NATIONAL ACME CO.
CLEVELAND, OHIO

IEN-3521

THERMOMETER . . Thermocouple and resistance units for plant, equipment

Source: GENERAL ELECTRIC CO.
Dept. 6X-201, Schenectady 5, N. Y.

New line of [illegible] thermocouple units [illegible] and equipment [illegible] and the other is a resistance design. The former is [illegible] of [illegible] because the [illegible] can be used from 100 and 500 deg. F. [illegible] between minus 100 and plus 400 deg. F.

The thermocouple design [illegible] a thermocouple with a [illegible] that not requires any external power supply. Difference in temperature between the hot and cold junctions generates a small voltage that causes a [illegible] to move in terms of temperature. Two sizes in this design have 2½ and 3½-in. flanges, can be supplied in square or round Bakelite cases.

The resistance unit employs a [illegible] to measure current change in a varying resistance across a fixed voltage that is calibrated to temperature units. Operation is based on the principle that the electrical resistance of a metallic conductor will increase as the temperature increases. This principle is employed in a bridge circuit which is carried by [illegible] potential [illegible] through a constant voltage transformer and copper-oxide rectifier. Two types in this design have 2 and 4-in. scales. Assembly is in a metal case with a Bakelite cover.

Bulletin GEA-565, 8 pages, illustrated description of both designs with data on applications, temperature ranges, operating principles, dimensions.

IEN-3522

VALVE . . Three way hydraulic, air operated, to handle two pressures

Source: SEELY INSTRUMENT CO.
307 Fourth St., Niagara Falls, N. Y.

New air [illegible] valve [illegible] to handle two pressures [illegible] in the [illegible] Seely valve [illegible] to [illegible] in first position [illegible] to approach [illegible] pressure [illegible] through the valve [illegible] to approach [illegible] pressure [illegible] the valve [illegible] pressure [illegible] the valve [illegible] pressure [illegible] the valve

BUREFITT—Identify by IEN-3527 if you write the maker

The "MASTER" Line

OF MATERIALS HANDLING EQUIPMENT

"Engineered to Save You Money"

Get This Latest L-S Bulletin

Featuring Electric Power Fork Trucks

SEND FOR BULLETIN NO. 75

CUT COSTS WITH The "MASTER" Line

SPACEMASTER Electric Trucks
SPACEMASTER Gas Trucks (Fork Types)
MASTER JACKSTACKERS
JACKLIFT ELECTRIC Trucks
MASTER JACKTRACTORS
MASTER JACKLIFT Trucks
MASTER QUICKLIFT Trucks
MASTER REDLIFT Trucks
MASTER SPEEDLIFT Trucks
POWERMASTER Stackers
SPEEDMASTER Stackers
ELECTRMASTER Trucks
SHOPMASTER All-Steel 2-Wheel Trucks
WELDMASTER Platforms
LOADMASTER Racks

THE "MASTER" LINE

LEWIS-SHEPARD PRODUCTS INC.

142 Walnut St., Watertown 72, Mass.

Midwest Plant: Crawfordsville, Ind.

Representatives in Principal Cities

BUREFITT—Identify by IEN-3528 if you write the maker

New booklet tells how to save on ring-shaped parts

Learn how manufacturers have realized startling savings on machining, weight and cost through Dresser's unusual services and facilities for making ring-shaped and cylindrical metal parts. You may save as much as more. Write today for "Brass Tubing"

DRESSER MANUFACTURING DIVISION

50 Fisher Ave., Bradford, Pa.

One of the Dresser Industries

BUREFITT—Identify by IEN-3529 if you write the maker

• A New lightweight tubular steel scaffolding designed to fit all of your maintenance scaffolding needs and at a low cost comparable to bulky wood-type scaffolding.

• And, the time saved in erecting and dismantling, plus the ease of moving and storing, will more than pay for the scaffolding. Get Ladscaf . . . distributors in principal cities.

Send for New Scaffolding Catalog No. 125

UNIVERSAL

MANUFACTURING CORP. ZELIENOPLE PA.

For Your Special Information

ALL MAKERS ARE LISTED — IEN S-10

A salesman for advertising space in a limited scope directory was calling on a manufacturer of prefabricated buildings. Aiming to compete with Thomas' Register, he stated, "The Register circulation is largely wasted because a lot of it goes to makers of clothing, to cotton mills, lace factories. What good," he asked, "would a lace factory be to you?"

The manufacturer replied, "Such a factory would appear to be of no use to me, but . . ." Then he reached into his desk and pulled out a letter which he handed to the salesman. The letter was from a lace manufacturer asking for quotation on a steel garage building.

The important point for you to note is that the salesman's face turned red, that he closed his bag of arguments and departed. It is instant the fact that you recognize in the Register the one place where all makers are listed for all products made in the United States.

YOUR INQUIRIES — IEN S-11

A manufacturer sent us a news release on a product of his. With the release came adequate confirmation of newness, availability and apparent desire on the manufacturer's part to service any inquiries that might result from publication in IEN. Accordingly we published the item. Half a hundred inquiries did come to us and we forwarded them. A little later we happened to include this manufacturer with a number of others we were checking from the angle of inquiry handling in your interests.

To our surprise we were told that he did get the inquiries and a good many additional ones direct but he had not been able to service them because he was busy with other matters.

Fortunately such cases are few in number. We do urge you, however, to let us know as quickly as possible of any instances in which you either do not receive a reply to your inquiries in due course or in which the information you do receive is sketchy, offhand, or inadequate. We assure you immediate action, because we count each inquiry received from you as a serious and interested request for data that should be answered seriously and with prompt interest.

GENERAL ELECTRIC VERSION OF TANSTAAFL — IEN S-12

WHAT WOULD YOU DO?

BUREFITT—Identify by IEN-3530 if you write the maker

When fed to your steam system, **CORAVOL** (1) prevents corrosion in steam and condensate lines, (2) slows and stopping rust deposits resulting from previous corrosion. Thus, **CORAVOL** protects lines, increases the effectiveness of heat transfer surfaces, restores original capacity of lines and the operating efficiency of valves and traps.

CORAVOL is part of a complete technical service which provides special formulas of treatment for: Boiler Feed Water . . . Hot Water Supply . . . Refrigerating Brine . . . Cooling and Condenser Water . . . Rapid Scale Removal . . . Coagulation . . . Algae Control.

Write TODAY to Western Chemical Company, 715 Washington Street, Kansas City, Missouri for complete FREE data about the **CORAVOL** process.

Western Chemical Co. is owner of U. S. Patent No. 2,538,024 covering the use of volatile amines in steam systems.

WESTERN CHEMICAL CO.

715 WASHINGTON — KANSAS CITY, MO.

BUREFITT—Identify by IEN-3531 if you write the maker

with 600 BEARING METAL!

Outperforms Phosphor Bronze and Most Other Bearing Metals

600 Bearing Alloy is approximately three times stronger than the best cast bearing bronze—YET IT CONTAINS NO TIN. It develops lower temperatures under heavier loads and higher speeds than the bearing bronzes, and extreme pressure lubricants do not damage it. • 600 is the solution to many difficult bearing problems. It can be drawn or forged and readily fabricated in a great variety of sizes and shapes. • While all of you have a bearing problem, 600 Alloy is for those tough jobs, and may be the very solution. Complete literature is available.

600 SERIES BEARING METAL

MUELLER BRASS CO. PORT HURON, MICH.

BUREFITT—Identify by IEN-3532 if you write the maker

Write for it.

DO YOU USE OR EXPECT TO USE HYDRAULIC OIL PUMPS, MOTORS, VALVES, CYLINDERS??
THEN YOU SHOULD HAVE THIS FOLDER.

THE COMMERCIAL SHEARING & STAMPING CO.

P. O. BOX 719 — YOUNGSTOWN 1, OHIO

BUREFITT—Identify by IEN-3533 if you write the maker

FOR VENTILATION, FUME & DUST CONTROL

FLEXAUST

SPIRAL-REINFORCED HOSE LIGHT, STRONG AND VERY FLEXIBLE

Flexaust is of proven versatility for a wide variety of uses and gives sure aid in ventilation, fume and dust control.

EXTREMELY EASY TO INSTALL—EFFICIENT AND ECONOMICAL IN USE

SIZES ½" to 24" dia.

Various Flexaust types, accessories, and other hose types also available.

BIOFLEX — Non-reinforced collapsible hose

PORTOVENT — Ring-reinforced retractable hose

Write for full descriptive data and prices

AMERICAN VENTILATING HOSE CO.

Dept. IE-2, 15 Park Row, New York 7, N. Y.

Plant: Amesbury, Mass.

▼ REPRINT—Identify by IEN-3534 if you write the maker ▼

LIFE STORY of a JOMAC WORK GLOVE

1. First day on the job and doing fine. Jomac cushions the hand, doesn't sag or tear.

2. Some time later . . . and a little worn. Presto! Shifts from right to left and starts a new life.

IT'S TRUE Jomac Work Gloves revolutionize handling problems. They're reversible, flexible, long-wearing. They're easy to wash or dry clean. They protect against heat or cold. Write for complete details.

JOMAC WORK GLOVES
C. WALKER JONES CO.
6135 N. Lambert St. Philadelphia 38, Pa.

▼ REPRINT—Identify by IEN-3535 if you write the maker ▼

Handy Helper that gives you *Power* FOR HAND PIPE TOOLS

Model "400" can be furnished with tip, hands, tool tray, feet and all fittings at small additional cost.

RIDGID Model "400"
. . . lightest power unit made

● One man alone can move this job-tested Model "400" around on the job. Weighs just a little over 100 lbs., gives you plenty of power for hand tool threading, cutting and reaming jobs. Universal motor—forward, reverse, light socket power. RIDGID 3-jaw chuck in front with chuck wrench ejector, self-centering workholder in rear turns with pipe. Sealed-in lubrication—no oil spillage. Many thousands of Model "400" Power Drives are now in actual service. Buy one at your Supply House.

RIDGID
WORK-SAVER PIPE TOOLS
THE RIDGE TOOL CO. • ELYRIA, OHIO

▼ REPRINT—Identify by IEN-3537 if you write the maker ▼

WELDING . . Magnetic connector clamps ground cable to the work

Source: DINGS MAGNETIC SEPARATOR CO.
4738-42 W. Electric Ave., Milwaukee 14, Wis.

Magnaground [illegible] a permanent Alnico magnet with a socket for a ground cable. Tongs are adjustable [illegible] to accept the cable in the work or grounds of a particular operation [illegible]. The square block in the jaws measures 2 by 2 inches. Overall length is about [illegible] and height of the unit is [illegible]. The unit has capacity to carry [illegible] amperes. It will clamp to [illegible] and be placed on top of a flat surface [illegible] to function satisfactorily. List is about $10.

▼ REPRINT—Identify by IEN-3538 if you write the maker ▼

PROTECTING . . Rubber glove with molded rough gripping surfaces

Source: B. F. GOODRICH CO.
448-52 S. Main St., Akron 11, Ohio

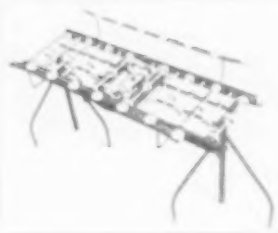
Twelve pairs to a box

Sand Grip [illegible] gloves made of natural rubber with the gripping surfaces roughened by the molding operation. The cuffs measure [illegible] in thickness. The gloves assist in handling wet objects, it is pleasant to grip small things. Full sizes are 7 to 11, with half sizes in 8. Length of the gloves varies in 11 sizes.

▼ REPRINT—Identify by IEN-3539 if you write the maker ▼

HANDLING . . Glue applying section of wheel conveyor to palletize cartons

Source: SAGE EQUIPMENT CO.
28-32 Essex St., Buffalo 13, N. Y.



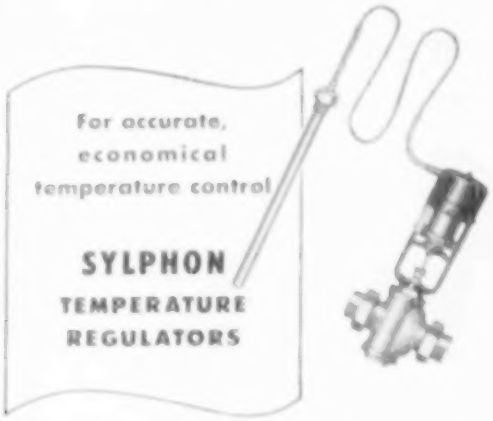
Filled cartons are held together in position ready for alignment by means of arms are passed over the glue conveyor section. Two applications of glue are made, the first in a very upper stream of manufacture, the glue is the carton bottoms. When the cartons are stacked at the conveyor end they will adhere to each other.

The section is available in 12, 14 and 18-in. widths. Length is 51 inches. Height is adjustable by application of various stands available. Load capacity per section is 100 pounds.

All Makes of Tires And 36 Other Products Are Found in THOMAS REGISTER — Incorporate — Rather — See Page 9

▼ REPRINT—Identify by IEN-3540 if you write the maker ▼

▼ REPRINT—Identify by IEN-3541 if you write the maker ▼

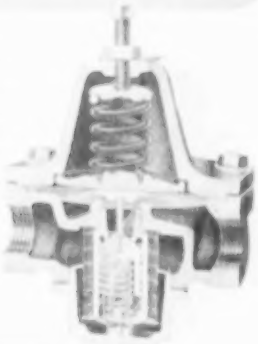


Regulator No. [illegible] (pictured) is not one of the Sylphon line of dependable regulators. It's ideal for controlling temperature in heavy machines, glue kettles, starters, ripes and closed tanks and for other processing operations. Self-powered, self-contained. Rugged and long-lasting. Graduated indicating scale. Available with indicating thermometer [illegible]. Catalog [illegible] gives full information. Send for it today.

FULTON SYLPHON
DIVISION
ROBERTSHAW-FULTON CONTROLS CO. • KNOXVILLE 4, TENN.
Temperature Controls • Fulton Linens • Fulton Automotive

▼ REPRINT—Identify by IEN-3542 if you write the maker ▼

stopping ONE HEADACHE . . .



Once you have chosen Cash-Acme valves as component parts of your factory equipment, you can stop worrying about valve failures or sudden shutdowns.

We invite you to investigate Cash-Acme direct acting single stated pressure reducing valves for steam — water — air — or gas lines.

CASH-ACME
Automatic Valves

Type R series. For full information, request catalog 144.

A. W. CASH VALVE MANUFACTURING CORP.
6612 East Wabash Avenue, Decatur, Illinois, U. S. A.

▼ REPRINT—Identify by IEN-3543 if you write the maker ▼

Cut Production Costs . . . Permit Ease of Assembly

HERE'S HOW

- Eliminates skilled labor to key seat cutting and key fitting operations.
- Are seen on available because of the key bottom and curving cutting.
- Key seat bottom [illegible] shaft and is firmly embedded, no sliding, only additional security needed.
- Offers greater resistance to shaft torque due to shape of key set and permanent key fit.
- Simplifies key seat cutting to repeat shafts.

Whitney Woodruff Type Keys are made to American Standard sizes and Whitney Standard sizes for special application. They are available from Whitney distributors throughout the country or write:

WHITNEY CHAIN & MFG. CO.
Division of Whitney-Hanson Industries, Inc.
202 Hamilton Street, Hartford 2, Conn.

IEN-3544

● FLEX . . . it's open! ● RELEASE . . . it's shut!
● No lever or button to push or squeeze

As an air blow-gun or fluid nozzle, this Alemite Flex-Tip Valve is the handiest automatic hose attachment ever designed. Just flex the rubber tip with your thumb to open valve. Release your thumb and the valve shuts off tight. Available with ¼" and ½" female p.t. connection. Write Alemite, Dept. K-46, 1850 Diversey Parkway, Chicago, Illinois.

ALEMITE

IEN-3545

Check! the effects of TEMPERATURE and RELATIVE HUMIDITY

✔ on workers
✔ machine output
✔ assembly parts

with the *BENDIX-FRIEZ* Model 160

Relative Humidity and Temperature play vital roles in your plant's productive capacity—a check of your plant's record against a record of these two factors will demonstrate this beyond question. With the Bendix-Friez portable humidity and temperature recorder, 10 to 30 hour records may be kept on 3" x 5" charts. Modern in design, handy for small space, this instrument is ideal for making on-the-spot recordings. Write us.

FRIEZ INSTRUMENT DIVISION of BENDIX AVIATION CORPORATION
1338 Taylor Avenue
Baltimore 4, Maryland
Export Sales: Bendix International Division, 72 Fifth Avenue, New York 11, N.Y.

IEN-3546

THIS BOOK SOLVES YOUR LIQUID HANDLING PROBLEMS

THIS WAY

THIS WAY

THIS WAY

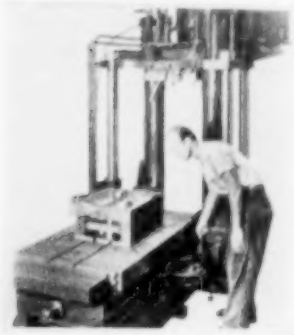
Write for prices and FREE Catalog today.

PHILLIPS PUMP & TANK CO.
5010 Bluffbrier Rd. Cincinnati 9, Ohio

IEN-3547

HANDLING . . Die tryout machine for final assembly, fitting, testing

Source: LESTER ENGINEERING CO
2709-13 Church Ave., Cleveland 13, Ohio



Manual effort [illegible]

Hydraulic cylinders [illegible]

The machine [illegible]

IEN-3548

FASTENING . . Formed steel nail anchors insulation to sheet metal roof

Source: TINNERMAN PRODUCTS INC
2036-40 Fulton Road, Cleveland 13, Ohio

New nail [illegible]

Three sizes [illegible]

IEN-3549

AMERICAN WELDING "Controlled Technique" is more economical for YOU!

Rings, bands and welded-on [illegible] Fabricated by American Welding "Controlled Technique" will save you money.

All types of resistance and fusion welding applicable to ferrous and non-ferrous metals and alloys. Heat treating and machining are available.

It's easier and more economical for you to deal with American Welding. Our 42 years' experience is yours for the asking. Send your requirements for prompt quotation.

SEND FOR 16 PAGE CATALOG

THE AMERICAN WELDING & MANUFACTURING CO.
160 DIETZ ROAD • WARREN, OHIO

IEN-3550

Do you have an unusual sound deadening or noise quieting problem? Then you should investigate Tufflex—the resilient, felted wood fiber material that rolls or cuts into any shape. Higher efficiency in sound absorption. Tufflex also resists thermal conductivity. Amazingly resilient, Tufflex, you'll discover, [illegible] For a wide variety of uses, Tufflex is made in moisture resistant, fire retardant and mildew-proof form—and in blankets or sheets of various thicknesses, widths and densities. For acoustic information about Tufflex, write us—

WOOD CONVERSION COMPANY
DEPT. 1046 FIRST NATIONAL BANK BLDG. ST. PAUL 1, MINNESOTA

IEN-3551

CUT MAINTENANCE MANHOURS IN HALF

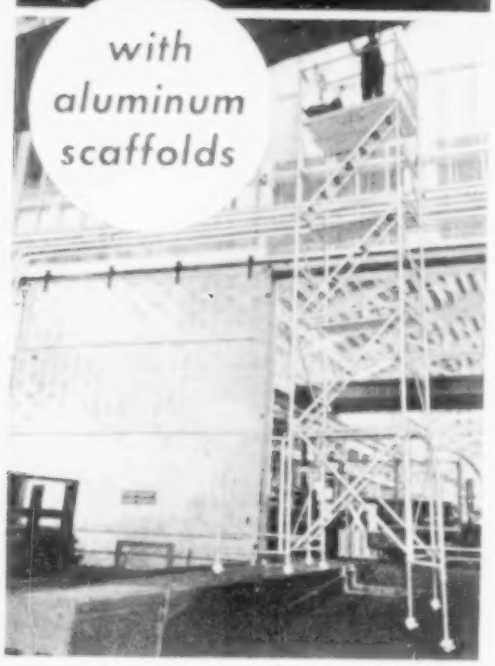


Photo courtesy of The Kaiser Company

Complete very unusual maintenance jobs in half the time with these new scaffolds of Alcoa Aluminum. Two men easily erect the aluminum scaffold shown here in 10 minutes, thanks to aluminum's light weight. Compare that to the 2 hours it used to take. [illegible] Write for a complete list of manufacturers who make these heavy, sighty scaffolds. ALUMINUM COMPANY OF AMERICA 1422D Gulf Bldg., Pittsburgh 19, Pa. ALCOA

ALCOA FIRST IN ALUMINUM

IEN-3553

Interlocking wires lace together to form a continuously flat and extremely flexible, open mesh, conveyor belting. Simple to install, it is positively driven, easily guided, readily cleaned and quickly repairable.

Available in cadmium plated or stainless steel, it can be supplied in light or heavy gauges and in widths from 2". Special sizes, designed to your specifications, can be supplied at no extra charge. Most belts can be delivered from stock.

For typical applications and illustrated uses, write

WIRE BELT COMPANY OF AMERICA

750 Main Street, Cambridge 39, Mass.

IEN-3554

Write for Catalog OF USES and SPECIFICATIONS

GENERAL Industrial Pneumatics

ADD THESE 6 SELLING POINTS TO YOUR PRODUCT

SAVE
- TIME
- LABOR
- FLOORS

REDUCE
- BREAKAGE
- MAINTENANCE
- COSTS

MORE
- AIR VOLUME
- STABILITY
- LOAD CAPACITY
- MILEAGE

THE GENERAL TIRE

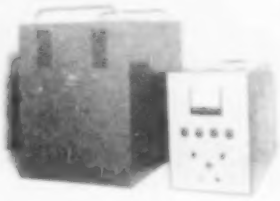
SEND FOR CATALOG ... DEPT. 3

THE GENERAL TIRE & RUBBER CO. AKRON, OHIO

IEN-3556

TESTING . . Electronic power supply for regulated high voltage dc. output

Source: RADIO CORP. OF AMERICA
1941 Front & Cooper Sts., Camden, N. J.



Type EMF-7

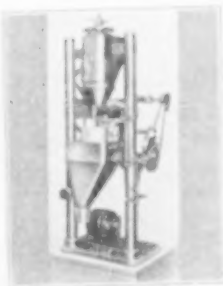
The two-part assembly

Regulation

IEN-3557

PACKAGING . . Net weighing machine for dry materials in units to 5 pounds

Source: AUTOMATIC SCALE CO.
P. O. Box 46, Village Station, New York 14, N. Y.



Model NPA

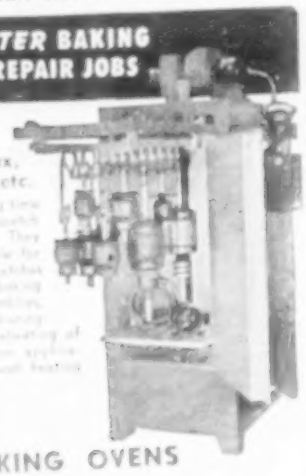
The material

The assembly

IEN-3558

50% FASTER BAKING ON REPAIR JOBS

Ideal for Synthetic Films, Dulux, Lacquer, Enamel, etc.



DESPATCH
R S Batch Type
FINISH BAKING OVENS

They are of quick heat-washed and do not require an engineer to use them as they are fully equipped with working range from 200° to 500°. A thermostatic heat control for desired uniform temperature. Five Sizes from 16 to 70 cu. ft. capacities, all sizes be used and installed. When writing for literature, kindly tell us what type of work you have.

Write for Bulletin 5-R-1 (Batch)

DESPATCH

Heat Processing, Engineering, Testing, All Industrial and Laboratory Equipment

527 DESPATCH BLDG., MINNEAPOLIS 13, MINNESOTA

IEN-3559

TANKS CLEANED WITH VACUUM

This illustration, obtained by pointing the camera through the manhole of a large tank, shows how plastic lined tanks are cleaned with the Spencer 1½ HP portable just before delivery. The Spencer Portable can be rolled to the work. The dirt can is on casters and can be emptied in a few seconds. Spencer equipment is also used to remove liquids from tanks, and to provide pressures for tank testing.

JSA-P

150 USES FOR VACUUM ... ASK FOR BULLETIN
THE SPENCER TURBINE COMPANY • HARTFORD 6, CONNECTICUT

SPENCER

IEN-3560

Graham

THE FINEST Variable Speed Drive MADE

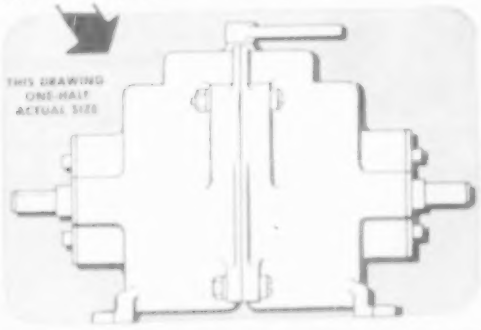
1. GUARANTEED MOST ACCURATE
2. WIDEST RANGE
3. MOST COMPACT

NOW IN A NEW MIDGET SIZE

$29.75 F.O.B. Milwaukee

Price to O.E.M. Buyers, less quantity discount

MODEL 10



ONE-HALF SIZE VIEW OF THE MODEL 10 The Model 10 is ideal for small machines such as pumps, feeds and feeders, Bulkmat machines, instruments, recorders, controllers, etc. etc.

MODEL 10 SPECIFICATIONS

OTHER SIZES UP TO THREE HP For quick delivery of a Model 10 or full data on the Graham line, use the coupon, or refer to the Reader Service Card inserted in this magazine.

GRAHAM TRANSMISSIONS INC. 2744-N Holton St., Milwaukee, Wis.

Please send me the literature shown in item ... on the Graham Model 10.

Name

Title

Firm

Address

City Zone State

RIEFFITT—Identify by IEN-3562 if you write the maker

A "PACKAGED" UNIT—Complete with built-in hydraulic power unit, controls, and pressure gauge. Capacity, 5 tons. 10" stroke, 7" reach, 16" daylight. Stroke and pressure adjustable. Choice of models for bench or floor mounting.

DOZENS OF USES—Ideal for countless punching, press-assembly, forming, straightening, broaching, and similar operations.

BIG VALUE! LOW COST—Built to "Big Press" standards of quality! Rigid, deflection-resistant frame. Precision-built cylinder and ram.

POPULAR WITH USERS—Works fast with effortless ease. Precision pressure control at operator's finger tip. Easy to set for exact repetitive pressures.

QUICK DELIVERY—Get the presses you need now out of Hannifin's regular volume production. *Write for descriptive literature.*

HANNIFIN CORPORATION
1107 S. Kilbourn Ave., Chicago 24, Ill.

RIEFFITT—Identify by IEN-3563 if you write the maker

PRECISION DILLON THERMOMETERS OFFER THE FINEST IN SCIENTIFIC HEAT CONTROL

These carefully engineered instruments can be screwed into tanks, boilers, stacks, pipes, etc. Come in stem lengths of 3" or 9" with special lengths to order. Dials are 3" or 5" with large, easy to read figures. Made of 18-8, acid resistant stainless steel. FOUR ranges: 0-300°F, 50-500°F, 150-750°F, 300-1000°F. Also available in Centigrade equivalent. Dillon Engineers are glad to adapt this unit to your manufactured products. Write today for folder and low price schedule.

the **DILLON** *dial*
STAINLESS STEEL
thermometer

W. C. DILLON & CO.
5410-K W. HARRISON ST.
CHICAGO 44, ILLINOIS

RIEFFITT—Identify by IEN-3564 if you write the maker

RIEFFITT—Identify by IEN-3565 if you write the maker

THREADING . . Motor driven head applies power to manual pipe tools

Source: TER-I-DAY SALES CO.
18424-28 Grand River, Detroit 23, Mich.

Fort-A-Pony is a new driving head built into a magnesium housing and equipped with a ¼-hp. 110-volt 60-cycle universal reversible motor. The motor is gear connected to a steel worm that drives a bronze gear to operate the driving head. This head takes adapters for any of seven standard makes of manual pipe threading tools. Rated capacity is for pipe from ¼ to 2 inches.

The assembly weighs 26 pounds. It measures 32 for 11 to 6 in., the last named dimension without dies and adapters. It is provided with a 25-ft. extension cord and plug. Application is at a pipe stand, overhead, between floors, in wet pits and to within 3 in. of a wall.

RIEFFITT—Identify by IEN-3566 if you write the maker

FIRST AID . . Jelly ointment for burns, can be washed off with water

Source: DAVIS EMERGENCY EQUIPMENT CO.
58 Halleck St., Newark 4, N. J.

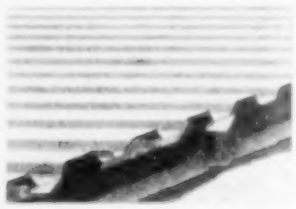
Excludes air
deadens pain

Americare trade names water-soluble jelly ointment (for a available now in a tube and carton to fit the D-Carton interchangeable unit system for first aid. The ointment contains Benzocaine to relieve pain and keep it deadened over a considerable period. Cryquinolin Iodoxide provides antiseptic action for a burned area.

RIEFFITT—Identify by IEN-3567 if you write the maker

FLOORS . . Corrugated steel plate for bridge floors, takes asphalt finish

Source: UNITED STEEL FABRICATORS INC.
331-35 Gasche St., Wooster, Ohio



Laying width is 33 in. and section lengths are standard at 6, 8, 10 and 12 ft. in this new steel flooring with its repeated corrugations that measure 2 in. in depth. Steel gage is 7, 10 or 12 to specifications. The steel is designed to take the place of plank flooring in a bridge.

Slots are punched in the corrugations to match bridge stringers so the plate can be bended in place. It also is welded between adjacent pieces at suitable intervals. About 17½ sq. in. of asphalt are required per ft. of road section using a 1½ in. wearing course.

All Makers of These And All Other Products Are Listed in THOMAS' REGISTER — Descriptions — Ratings — See Page 10

RIEFFITT—Identify by IEN-3568 if you write the maker

THE MORSE *Improved* DRUM CRADLE TRUCK

Makes drum handling a completely safe operation. Retracting casters (none swings inside rockers) when drum is being rocked up, then is thrown forward by pressure on the foot lever, placing casters well forward. Provides a long, wide and safe wheel base.

MODEL [illegible]

FOR SAFE, EFFICIENT OPERATION

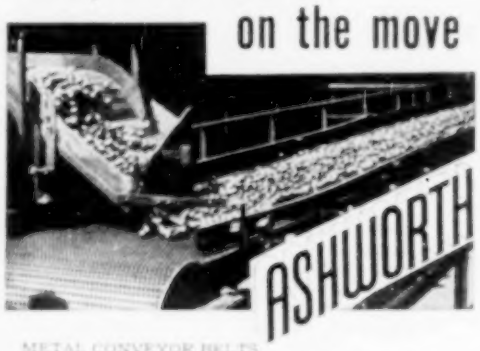
Two 3" wheels and two 3" casters. Platen being 24" above floor. Weight 95 lbs. Red enamel finish. Four rollers mounted on top rails for positioning bung on 55 and 110 gal. drums.

Write for data on special MOTORIZED UNIT for mixing liquids right in the drum and for cleaning used drums easily and quickly. Also available in closed side MODEL [illegible]

MORSE *MANUFACTURING CO.* INC.
133 Dickerson Street Syracuse 2, N. Y.

RIEFFITT—Identify by IEN-3569 if you write the maker

Keep Your Product on the move



METAL CONVEYOR BELTS can help offset increased production costs by keeping your production on the move . . . increasing your hourly production! The right metal belt for your job means longer operating periods between maintenance shutdowns, longer belt life, greater economy!

Ashworth Engineers and Builds all Types of Wire Belts for Industry.

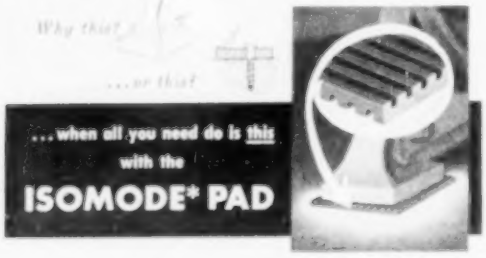
WRITE FOR ILLUSTRATED CATALOG 47B

ASHWORTH BROS., INC.
METAL PRODUCTS DIV. • WORCESTER, MASS.

Sales Engineers located in Atlanta • Chicago • Cleveland • Detroit • Los Angeles • New York • Philadelphia • Seattle
Canadian Rep. HOWDEN-CO. Toronto • Montreal • Halifax • Winnipeg • Vancouver

RIEFFITT—Identify by IEN-3570 if you write the maker

AVOID NEEDLESS COSTS in installing machines!



You can now mount bits easily with Isomode Pads.

(1) On metalworking machines. Ease a single bit on and then use of this low-cost, oil- and water resistant mounting has proved successful in thousands of cases. Most machine tools so belong to floor or special base construction. Simply put bed to required size and mount under machine bed.

(2) On operating tools. These resilient pads fit all working vibration and shock absorption with considerable noise and expense. You may find a Tools Tools Company, can increase operating time, product quality of work.

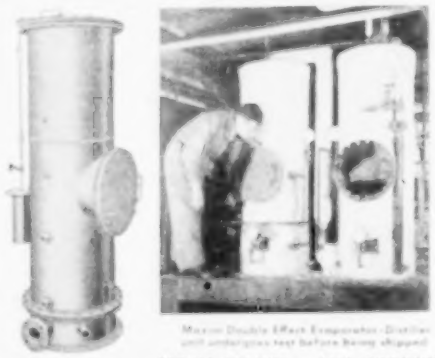
Isomode Pads work under a wide variety of equipment: Tools, high frequency punch presses down to compressors. Try an installation for substantial results. Write for bulletin 401.

*Trade Mark Reg. U. S. Pat. Off.

THE MB MANUFACTURING COMPANY, INC.
1064 State St. New Haven 11, Conn.

RIEFFITT—Identify by IEN-3571 if you write the maker

MAXIM EVAPORATORS



Maxim Double Effect Evaporator-Distiller unit undergoes test before being shipped

REDUCE SCALING — LESS DOWNTIME
ALL MONEL FOR LONG LIFE

SEND FOR THIS BULLETIN

THE MAXIM SILENCER COMPANY
77 HOMESTEAD AVENUE HARTFORD 1, CONN.

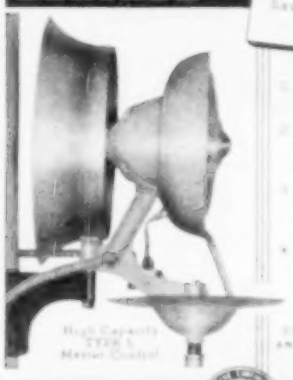
RAFFITT—Identify by IEN-3572 if you write the maker

AUTOMATIC HUMIDITY CONTROL

The Bahnson HUMIDIFIER

combines in one unit the four basic requirements of industrial humidification that have proven especially successful.

1. Atomizes water into a fine mist.
2. Vaporizes the mist with warm, air-washed, completely sterilized.
3. Distributes resulting vapor-filled air uniformly throughout room.
4. Automatically controls the evaporation to maintain a necessary relative humidity.



COMPLETE ENGINEERING AND SERVICE DEPARTMENT FOR CONSULTATION

Bahnson System
AIR CONDITIONING ENGINEERS
THE BAHNSON CO. WINSTON-SALEM, N. C.

RAFFITT—Identify by IEN-3573 if you write the maker

Ageproof VELLUM

Better Drafting and Better Prints

Unless you have tried Dietzgen's *Ageproof* Vellum it is not possible to appreciate the enthusiasm with which *thousands* have swung over to its exclusive use. They call it the perfect drafting medium . . . the finest surface for pencil or ink drawing they have ever had . . . a surface and transparency unimpaired by repeated erasures . . . a surface that stays clean for sharper, cleaner prints. Dietzgen's *Ageproof* Vellum is glassfaced through and through for *permanent transparency*. No oil, wax or grease to turn rancid, bleed, fade or rapture dirt and dust. No yellowing or brittleness after years of storage. For better drawings for better prints . . . every time and all the time use Dietzgen's *Ageproof* Vellum. In rolls, cut sheets and printed sheets. For samples or test sheets, call on your Dietzgen dealer or the nearest Dietzgen office.

EUGENE DIETZGEN CO.
Chicago • New York • San Francisco • New Orleans
Los Angeles • Pittsburgh • Washington
Philadelphia • Milwaukee
Dealers in All Principal Cities

DIETZGEN
DRAFTING, SURVEYING & PRINT-MAKING MATERIALS, INSTRUMENTS & EQUIPMENT

RAFFITT—Identify by IEN-3575 if you write the maker

COUNTING . . Wheel type unit, rotating drive, 4, 5 or 6 figures

Source: DURANT MFG. CO.
1930 N. Buffum St., Milwaukee 1, Wis.

. Drive shaft ¼ in. diameter extends ⅝ in. on both sides of the thermal housing of this new counter. The figure wheels provide the usual lock of a fixed window in the housing. Rotation can be specified in either direction at 100 rpm or less. The black figures stand 11/32 in. in height by ⅛ in. in width on a white background. Rotating shafts are mounted on oil-impregnated bushings.

The assembly is panel or diameter or can be equipped with a wing-nut fixed. The standard flange mounts use for such resolution of the drive shaft.

RAFFITT—Identify by IEN-3576 if you write the maker

PAINTING . . Roller coating liquids for metal decorating, quick drying

Source: WATSON-STANDARD CO.
223-7 Galveston Ave., Pittsburgh 12, Pa.

Technical service is available

Vinyl Size No. [illegible], a lacquer with the coating No. 11-[illegible] and a lacquer with the coating No. 11-[illegible] are used for roller application for the paint of Black plate decorating. Drying conditions for the three are they have been identified are [illegible] at 300 deg. F., 4 min. at 350 deg. F. and 3 min. at 375 deg. F.

Characteristics are good adhesion and good fabrication qualities. Standard Colours of Vinyl Paint in various spray viscosities can be used. Physical properties are similar to conventional [illegible] and Baby Bottom.

RAFFITT—Identify by IEN-3577 if you write the maker

SOLDERING . . Gas fired iron and heater for plain soldering irons

Source: INSTO GAS CORP.
1975-79 E. Woodbridge Ave., Detroit 7, Mich.

New assembly of the [illegible] iron weighs [illegible] lb. and can be used [illegible] in the [illegible] of the [illegible]. The generator and supplied is [illegible] a burner and a heated wand for brass plate soldering. Iron is shown on the table. Iron [illegible] is shown on the table. Iron [illegible] is shown on the table. Iron [illegible]

IEN-3582

for Quicker Assembly!
for Easier Breakaway!
yet Maximum Clamping Action!

All the tried and proved advantages of taper-bushed construction plus PERFECTED TAPER that provides quicker assembly, easier breakaway, yet maximum clamping action. Perfected taper of the one-piece bushing also results in more accurate alignment.

American Taper-Bushed Wedgbelt Sheaves are dynamically balanced for quiet, vibration-free performance. Accurately machined grooves mean maximum pulling power and long belt life.

For more information on how to simplify your sheave installation, removal, and performance, drop us a line, now.

The American Pulley Company
4292 Wissahickon Ave., Philadelphia 29, Pa.

IEN-3583

DUAL CROSS and ROTARY FEED

PALMGREN

Rotary, Index, Milling Table

No. 83

Now Only $49.50

Turns Your DRILL PRESS Into A VERTICAL MILLER

Order Today! If Dealer can't supply, write us. Ask for Circular No. 39

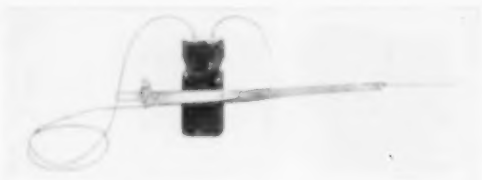
CHICAGO TOOL and ENGINEERING CO.
MFG. of PALMGREN PRODUCTS Since 1918
8406 South Chicago Ave. Chicago 17, Ill.

IEN-3584

IEN-3585

RECORDING . . Trace marking pen carries ink supply for several months

Source: AMERICAN RECORDING CHART CO.
3111-15 E. 11th St., Los Angeles 23, Calif.



Screw Setter Bit: Flash Gauge now has this 0.00 size bit for use in small screw-type permanent installations. It is designed to replace the operator's pen that requires swivelling of fingers overtime. The new pen retains the full flexibility action from the ink bottle contained in the pen's handle. Replace when the ink barrel runs out. It is made of hard felt tube and cannot be contacted with the air until it reaches the pen point.

List price is $0. Guaranteed one year against defects. Brushes or fast-drying ink can be employed. Demonstrating ink supply does not affect suspended weight. If the pen wears the only change is in the bottle which is separate from the pen for ordinary use in the operation footing.

IEN-3586

CLEANING . . Steel blasting shot cut from wire, also for metal peening

Source: PELLETS INC.
275-79 Military Road, Buffalo 7, N. Y.

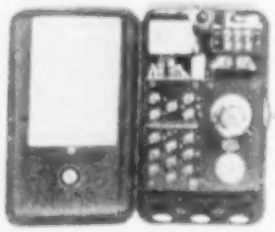
Ask for 4-page "Pellets" bulletin

SAE 1065 steel is used in manufacturing shot, average 45 to 51 on the Rockwell C scale, is not too brittle to be employed in the wire-to-shot manufacture of the company's new Pellets Blasting and peening shot. Shot sizes range from 0.09 to 0.0625 inch. The shot is actually made in the form of a cylinder, but the spherical is obtained during shipping and handling.

IEN-3587

CONTROL . . Electronic equipment for safe oil or gas burner operation

Source: COMBUSTION CONTROL CORP.
75-79 Broadway, Cambridge 42, Mass.

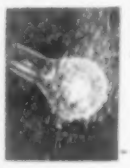


Type CIP47 [illegible] Operating and wiring [illegible] Load [illegible] Operating [illegible] Wiring [illegible] Dimensions [illegible] Weight [illegible] Price [illegible]

10 Makers of These And All Other Products Are Listed In THOMAS REGISTER Dependable Ratings See Page 10

IEN-3588

3 ways you save on lighting costs



1. AMPLEX "WEATHERCOTE" LAMP. Clear lamp increases life to 10 times normal, shows no outdoor weather kill-off, reduces lamp costs 1/3 to fourfold times.

2. AMPLEX DOUBLE DUTY LAMP. Packaged for high bay and other hard to reach locations. A [illegible] lamp [illegible] service. Longer life lamp and [illegible] maintenance costs [illegible]

3. AMPLEX REFLECTOR LAMP. [illegible]

amplex

IEN-3589

There's nothing to compare with it!

CM CYCLONE
LIGHT WEIGHT—HEAVY DUTY
High Speed CHAIN HOIST

67% Less Weight. [illegible] 47% Fewer Parts. [illegible] 74% Efficient. [illegible] Hero Alloy Flexible Load Chain. [illegible] Sealed in Lifetime Lubrication. No attention required. Low Cost. No more than factory and style chain hoists [illegible]

Write for BULLETIN 745A or phone your local CM Distributor for a demonstration.

CHISHOLM-MOORE
HOIST CORPORATION
Affiliated with Columbus McKinnon Chain Corporation
GENERAL OFFICES AND FACTORIES: TONAWANDA, N. Y.
SALES OFFICES: New York, Chicago and Cleveland • Distributors Everywhere

IEN-3590

Eliminate errors in computing time with CALCULAGRAPH

—AUTOMATICALLY FIGURES JOB TIME!

ACCURATELY COMPUTES AND PRINTS { STARTING TIME / FINISHING TIME / TOTAL TIME

HANDLES ANY NUMBER OF CARDS IN ANY SEQUENCE

One Calculagraph can focus and record the time for an entire shop or large production department. The precision-built instrument prints rather multiple recording on any number of cards regardless of sequence. Calculagraph subtracts lunch and other non-productive periods automatically and can even be set to compute dollars and cents, if desired, where cost per minute is a factor.

PRINTS ACCURATE RECORDS EASILY FILED FOR REFERENCE

Calculagraph is the most economical means of obtaining completely accurate job time for computing costs. Keypunched printed cards can be filed for ready reference when estimating or for check backs on time study. Now as you go thousands of pieces and dials, large and small. Call or write for literature today!

CALCULAGRAPH
COMPANY • INCORPORATED
HARRISON • NEW JERSEY

SINCE 1892 — STANDARD EQUIPMENT IN THE TELEPHONE INDUSTRY THROUGHOUT THE WORLD

▼ [illegible] IEN-3592 [illegible] ▼

- The new Beaver No. 28-R "fully-adjustable" pipe threaders are better because:
  1. They will standardize threads on unknown threads or unknown length.
  2. The non-standard does actual on a single cart which means that all the separate cut equipment.
  3. The Beaver 28-R is the only 1 to 2-inch threader on the market which will cut either standard "taper" or standard "straight" thread.
  4. No standard size set of dies. Dimple from stock. 1 to 12 and 2 inches.
  5. The Beaver 28-R is the ONLY 1 to 2-inch wire working pipe threader on the market which is "fully-adjustable". It adapts for wide tolerances.
- Write Today for New Complete Catalog No. 40. Address Beaver Pipe Tools, Inc., 236-300 Dixon Avenue, Warren, Ohio, U. S. A.

BEAVER PIPE TOOLS

▼ [illegible] IEN-3593 [illegible] ▼

THE NATIONAL ELECTRIC COIL COMPANY'S
induction heating coil for pinion pulling.

an example of
the application of

Insulated with FIBERGLAS GLASS-BASE ELECTRICAL INSULATING MATERIALS

electrical insulating materials made with

FIBERGLAS*

Yarns

to help achieve
greater resistance to sustained high temperatures

A new manual of Fiberglas glass-base insulating materials is available now. Send for your copy today.

Owens-Corning Fiberglas Corporation, Textile Products Division, 16-01 Pt. 10 East 40th Street, New York 16, N. Y.

OWENS-CORNING FIBERGLAS *Yarns*

▼ [illegible] IEN-3595 [illegible] ▼

SORTING . . Socket and stud board reads threads and size of bolts, nuts

Source: STEWART MFG. CO
1833-37 14th St. N. W., Washington 9, D. C.

Bolt or nut [illegible]

The board [illegible]

▼ [illegible] IEN-3596 [illegible] ▼

PLASTIC . . Sheet material for use on sinks, counters, table tops

Source: YOUNGSTOWN MFG. INC.
64-78 S. Prospect Ave., Youngstown 5, Ohio

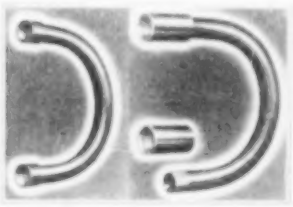
In eight colors
and two patterns

Durable [illegible]

▼ [illegible] IEN-3597 [illegible] ▼

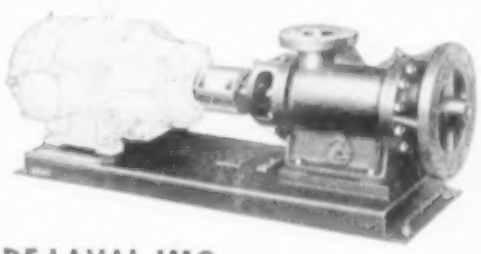
PIPE FITTINGS . . Return bends and elbows for radiant heating coils

Source: CAPITOL MFG. & SUPPLY CO.
151-55 W. Fulton St., Columbus 15, Ohio



New line of [illegible]

▼ [illegible] IEN-3598 [illegible] ▼



DE LAVAL-IMO

pumps highly viscous cellulose

Pumping high viscosity fluids is no problem with an IMO.

Suction losses, cavitation, turbulence and internal friction are held to an absolute minimum because of the unique form of the IMO rotors, the large suction opening and the axial flow design of this pump.

Send for Catalog LC31C-Q

IMO PUMP DIVISION of the
DE LAVAL STEAM TURBINE CO.
TRENTON 2, NEW JERSEY

▼ [illegible] IEN-3599 [illegible] ▼

SAFEWAY . . . a new light weight chain hoist

Designed to keep pace with today's demands for greater efficiency in materials handling, this new Wright hoist is light in weight, high speed, compact, strong, easy to service, long lived. Capacities from ½ to 4 tons. Load chains of steel—heat treated—proof-tested—have high wearing qualities and high safety factor against possible impact loads. Load wheel reversible. Weston type brake resistant to high temperatures, cold, wet and dusty atmosphere. Send for bulletin DH-161.

WRIGHT HOIST DIVISION
American Chain & Cable
York, Pa.

▼ [illegible] IEN-3600 [illegible] ▼

THIS BOOK CAN SAVE YOU MONEY ON QUALITY NAME PLATES

Etched or lithographed on metal, from quality name plates add color appeal to your products. Look better, longer. You can save money by using one of the 3000 shapes and sizes for which we have dies in stock. Ask us to quote on your name plate requirements. If you can use this book of stock shapes and sizes, write for it on your letterhead.

ETCHING COMPANY OF AMERICA
1520 Montana St., Chicago 14, Ill., Dept. F-9
SUBSIDIARY OF DODGE MANUFACTURING CORPORATION, MISHAWAKA, INDIANA

▼ [illegible] IEN-3601 [illegible] ▼

PIPE AND BOLT THREADERS

New Line! 4 Models! 4 Choices!

No. 782 PIPE THREADER
Stationary Die Head

No. 782-R PIPE THREADER
Revolving Die Head

No. 781-A BOLT THREADER
Automatic Revolving Die Head

No. 781-A BOLT THREADER
Automatic Revolving Die Head

The "RAPIDUCTION JR." Line

OSTER THE OSTER MFG. COMPANY
[illegible] Cleveland 3, Ohio, U.S.A.

BRIEFITT—Identify by IEN-3602 if you write the maker

FOR SAFE FOOTING

Ferrox™ A NON-SLIP, SURE GRIP ABRASIVE FLOOR COVERING

UNDER WET, DRY OR OILY CONDITIONS

anyone can apply **ferrox***

on any floor or walking surface. First, clean floor surface until free from dirt, grease, etc. Paint does not need to be removed if it has a good bond.

For Small Areas, Mask Off—With steel trowel, apply one thin coat.

Apply Second Filling Coat—After drying first coat 1-3 hours.

Remove Masking Tape—Allow 8-10 hours drying. Then ready for use—barefoot safety assured.

Safe Floors at Low Cost

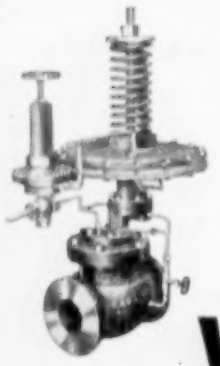
1 gal. can—$7.50 per gal.
5 gal. can—$7.25 per gal.
One gal. covers 40 sq. ft.
Colors: red, gray, blue, black, green.

For free literature illustrating uses and application data, write or phone Bob Estry.

AMERICAN ABRASIVE METALS CO.

468 COIT STREET • IRVINGTON, N. J. • Phone: ESsex 3-7060

BRIEFITT—Identify by IEN-3603 if you write the maker



GOLDEN-ANDERSON

Single Acting Differential

Altitude

Valves

Designed to maintain a constant water level within a variation of 3" to 12", these valves insure proper storage water circulation and eliminate stagnation in the storage supply. Also adaptable for water treatment storage tanks using water wheel pumps for chemical mixture.

Write for Descriptive Catalog

GA **GOLDEN-ANDERSON VALVE Specialty Company** PITTSBURGH 23, PA.

BRIEFITT—Identify by IEN-3604 if you write the maker

Mechanized floor cleaning the Multi-Clean way saves time, labor and money . . . does a better job. Learn how Multi-Clean can solve your problem. Write today.

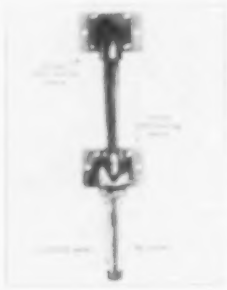
MULTI-CLEAN

Dept. 31A 2277 Ford Pkwy. St. Paul 1, Minnesota

BRIEFITT—Identify by IEN-3605 if you write the maker

METER . . Stainless steel rotameter reads gas flow rate, ¾ to 4 in. pipe

Source: FISCHER & PORTER
931 County Line Road, Hatboro, Pa.



Twelve sizes with gas flow rates at 50 to 20,000 cfh., based on air and 4 in. water-column pressure drop, are included in this new Fingrade equipment. It employs a stainless-steel tapered tube, cast-iron fittings and a stainless-steel float and pre-suspended indicator head. The head rides inside a tube mounted in a protecting holder and actually graduated over its whole length. The end fittings screw on adapters in a range from ¾ to 4 inches.

Overall length is 30¼ to 81¾ inches. Center distance between pipe connections is 16 or 34½ inches. The design is primarily for low pressure service but can be supplied for pressures to 600 pounds. Temperature is not a limiting factor.

BRIEFITT—Identify by IEN-3606 if you write the maker

PAINTING . . Vinyl resin primer for brush, spray or dip on metal

Source: ROYSTON LABORATORIES INC.
1950 First St., Blawnox, Pa.

Serves to bond and to protect

Vinachrome primer No. 1021 is a new corrosion-protecting coating material to apply on metal surfaces that are to be finished with a decorative paint. The vinyl resin base is pigmented with chromate and phosphate inhibitors to stop the metal and to bond to surfaces that have been galvanized or similarly treated. It is impossible to peel, blister and remain unchanged between the finish and the metal surface. The material is ready for use prior to use. Coverage is 600 to 800 sq. ft. per gal. for the new material.

BRIEFITT—Identify by IEN-3607 if you write the maker

SHEARING . . Motor driven machine for 20 gage steel, 30, 36 and 42 inches

Source: NIAGARA MACHINE & TOOL WORKS
635-39 Northland Ave., Buffalo 11, N. Y.

Steel plate is welded assembly is employed in the housings, bed, holddown and crosshead of this new machine for power shearing light gage sheet metal. Shafts are mounted in bronze bearings. The drive is by a ½ hp. Fairbanks Morse Pancake motor. The machine can be operated to 125 strokes per minute. It features visibility of the cut line through the openings in the holddown.

Three sizes provide nominal cutting length of 30, 36 and 42 inches. Gage ranges are to 19 in. rear and to 35 in. front.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . Descriptions . . Ratings . . See Page 50

BRIEFITT—Identify by IEN-3608 if you write the maker

Drill Hardened Steels without Annealing—

With the new improved "HARDSTEEL" Drill you can be accurate, smooth drilling, counterbores, counterboring and reaming in steels hardened by any process without first annealing the work. And they work with equal ease on work-hardening steels and high carbon-high chrome steels of any degree of hardness.

"HARDSTEEL" Drills fit standard drill presses. They save time and reduce waste. They permit engineering changes requiring refitting of existing tools. And parts drilled after hardening, it may work as intended.

Write for a copy of the "HARDSTEEL" Engineering Manual showing how "HARDSTEEL" drills set cutting time in thousands of pieces.

You Harden It—We'll Drill It—With "HARDSTEEL"

BLACK DRILL COMPANY
Division Black Industries
1378 East 222nd St. • Cleveland 17, Ohio

Also makers of BLACK DRILLING UNITS—AUTOMATIC SELF-CONTAINED—FOR COST-CUTTING PRODUCTION ON ALL MATERIALS

Write for information

BRIEFITT—Identify by IEN-3609 if you write the maker

Let The ARIDIFIER

CLEAN YOUR AIR AND GAS LINES

Removes 92% Oil, Water and Dirt

The Aridifier gives you positive removal of oil, moisture and other foreign matter from air or gas lines. With paints and lacquers it often eliminates bloom and imperfections in finish. It provides dry lines for ceramics, sand blasting, for air cleaning, etc. Wherever the need exists for dry clean air or gas, the Aridifier delivers the goods. Easily installed. No maintenance problem. 10 models available. Capacity range: As low as 7 CFM to 17,000 CFM.

BULLETIN 147 Tells The Complete Story

HOW IT WORKS Exploded view shows how four multi-bladed rotors revolve at high speed in opposite directions under impact of air movement through non-aligned rotor spaces. Moisture, dirt and other foreign matter which collect on rotor blades are thrown out of air stream by centrifugal force to side of housing, and pass into drain.

Made By The Manufacturers of Logan Lathes and Shapers

Logan ENGINEERING CO.

4901 W. LAWRENCE AVE. CHICAGO 30, ILL.

BRIEFITT—Identify by IEN-3610 if you write the maker

Chemical Resistant RUBBER PARTS

FEATURE LONG SERVICE LIFE UNDER HIGHLY CORROSIVE CONDITIONS

Excellent resistance to chemically, both concentrated and diluted, is featured by custom rubber parts fabricated from new specially-compounded stocks developed by The Stalwart Rubber Company. These new stocks are recommended for applications in which parts are subject to aniline, acetone, ethyl chloride, and numerous other chemicals.

Stalwart's special compounds also feature high resistance to animal fats, vegetable oils, ozone, oxygen, acids, alkalies, steam, extreme weathering, sunlight and dry heat.

Rubber parts made from these compounds have outstanding flex and abrasion resistance; dielectric properties make them suitable for use in electrical equipment.

The Stalwart Rubber Company is prepared to mold, extrude, and die-cut custom rubber parts in limited or production quantities from special or standard stocks. Recommended applications include seals and stoppers for chemical containers, gaskets and washers for systems handling highly corrosive acids or alkalies, tubing for installation in corrosive atmospheres or for conveying diluted or concentrated chemicals.

Write for complete specifications today.

Specify Stalwart for Quality Custom Rubber Products

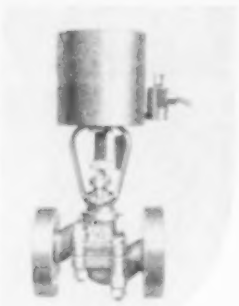
STALWART RUBBER COMPANY

4152 NORTHFIELD ROAD
BEDFORD, OHIO

BRIEFITT—Identify by IEN-3611 if you write the maker

New... Solenoid-Operated Valves

FOR ALL APPLICATIONS

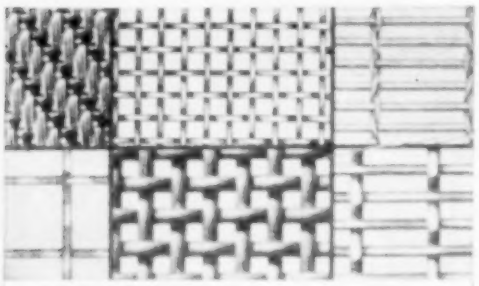


SERIES 1520

• *Write for Bulletin 1520 today!*

THE ANNIN COMPANY
3800 Union Pacific Avenue • Los Angeles 23, California

▼ REFER IT—Identify by IEN-3612 if you write the maker ▼



INDUSTRY-WIDE SUPPLIERS OF

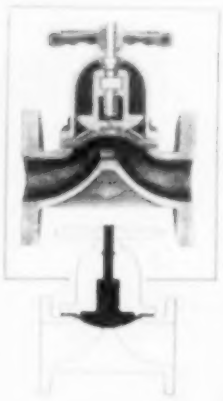
WIRE CLOTH

Industry's of type, one Woven and Crimped Wire Cloth for Sieves. Use and Screen plates. Wide selection of weaves and meshes, in all commonly used metals, to withstand corrosion, abrasion or high temperature. We are ideally equipped to handle large volume orders. Prices on request.

FREE BOOK . . . profusely illustrated . . . gives wire cloth meshes and weights. In the East, write Wickwire Spencer Steel; in the West, The California Wire Cloth Corp. Branches in principal cities.

WIRE CLOTH
WISSCO WICKWIRE SPENCER STEEL DIVISION CLINTON, MASSACHUSETTS
CALWICO THE CALIFORNIA WIRE CLOTH CORP OAKLAND, CALIFORNIA
CFI
DIVISIONS OF THE COLORADO FUEL AND IRON CORPORATION, DENVER, COLORADO

▼ REFER IT—Identify by IEN-3613 if you write the maker ▼



If you need a diaphragm valve . . . you need all the advantages of diaphragm closing . . .

you need

GRINNELL-SAUNDERS DIAPHRAGM VALVES

Diaphragm gives leak-tight closure against grit, scale, solid matter . . . even when trapped on the seat. The resilience of the diaphragm, plus the large area of contact, gives leak-tight closure against pressure or vacuum.

Diaphragm lifts high for streamlined flow in either direction . . . Smooth, streamlined passage, without pockets, prevents trapping of sludge and reduces frictional resistance to a minimum—irrespective of direction of fluid flow. No disc holder in fluid stream. Self-draining when installed with the spindle at 15 degrees above the horizontal position.

Diaphragm absolutely isolates working parts from fluid . . . No perforation or puncture in the diaphragm where fluid or gas can possibly leak by the valve spindle. No sticking, clogging or corroding of working parts. Valve lubricant cannot contaminate the fluid in the line.

Diaphragm, body and lining materials to meet particular conditions . . . Bodies stocked in cast iron, malleable iron, stainless steel, bronze and aluminum. Other materials on special orders. Valve bodies lined with lead, glass, natural rubber or neoprene. Diaphragm materials of natural rubber or synthetics. Working pressure: 150 lbs. maximum hydrostatic pressure; 100°F.

Diaphragm is only part that normally wears and needs replacement . . . Compressed and larger parts continue to support the diaphragm in all positions. The diaphragm can be replaced quickly without removing valve from line. No refitting or reseating. No disc holder to require lapping or replacing. No packing glands to demand attention.

Write for Grinnell-Saunders Diaphragm Valve Catalog #3

GRINNELL

▼ REFER IT—Identify by IEN-3615 if you write the maker ▼

CONVEYING . . Portable flight unit picks up cut pieces to stack at shear

Source: FRIED STEEL EQUIPMENT MFG. CORP.
526-30 E. 119th St., New York 35, N. Y.

Shipment is made [illegible] Flight conveyor is [illegible] Discharge [illegible] Adjustable [illegible] are provided [illegible] Discharge [illegible] are provided [illegible] Discharge [illegible] [illegible] [illegible]

The design is [illegible] handling of the cut pieces. It is portable to suit. Lack of cut specifications requiring machines for [illegible] Adjustable [illegible] Discharge [illegible] Adjustable [illegible] Discharge [illegible] [illegible] [illegible]

IEN-3622

New **POCKET COMPARATOR** saves you time and money inspecting small parts . . .

HERE'S WHAT IT IS

HERE'S WHAT IT DOES

Tool Room and Production Use:

General Use:

a product of BELL & HOWELL CO.

distributed by

Write for FREE Descriptive Folder

NATIONAL TOOL CO.
11230 Madison Avenue Cleveland 2, Ohio

IEN-3623

ACTUAL CHECK PROVES

No other Copying Process offers you

OZALID'S ECONOMY!

HERE'S PROOF!

See how Ozalid's most popular copying methods compare with the money-saving versatility of Ozalid

	Ozalid	Method A	Method B	Method C	Method D
Prints ready for punch as are	✓	✓	✓		✓
No size restriction	✓			✓	
No special plates, matrices or inks	✓			✓	
No need to make copy film	✓	✓	✓		✓
A Ozalid copy from master always available	✓				
Easily folded, flexible masters	✓				

WHAT IS OZALID?

WHAT ARE THE ADVANTAGES OF THE OZALID PROCESS?

OZALID PAPER IS UNEQUALED FOR QUALITY, TOO!

Cut Copying Costs...Use **OZALID!**

IEN-3625

SIGNALING . . Animated safety sign has illuminated message carrying tape

Source: MINE SAFETY APPLIANCES CO.
21 Braddock Ave., Pittsburgh 8, Pa.

Caution pass

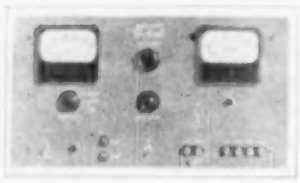
Back of the tape

Literature page

IEN-3626

TESTING . . Electronic power supply to provide variable dc. test voltage

Source: HEWLETT-PACKARD INC.
393-7 Page Mill Road, Palo Alto, Calif.

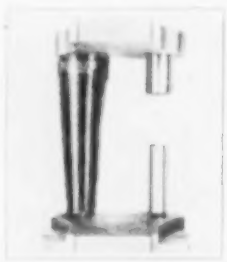


Model 412A

IEN-3627

PRESS TOOLS . . Spiral spring cover for die set leader pins and bushings

Source: CENTRAL SAFETY EQUIPMENT CO.
2202 E. Huntingdon St., Philadelphia 25, Pa.



Elastomer

All Makers of These And All Other Products Are Listed In FISHER'S REGISTER — Descriptions — Ratings — See Page 16

IEN-3628

Time to Discard

OLD-FASHIONED WAYS

Jacks . . . pulls . . . shoves . . . hitches . . . why fool with these obsolete methods of handling reels? DO IT THE MODERN, EFFICIENT WAY. Reel or unreel wire, cable, rope with

ROLL-A-REEL

Simple, strong, easily handled stand for pout reels to save time and labor. Adjustable slots for wide variety of reel sizes.

Style A
2,000 lbs. cap. 27.50
Style B
4,000 lbs. cap. 75.00
F.O.B. Cincinnati

WRITE FOR DETAILS TODAY

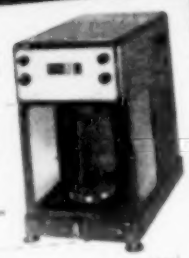
ROLL-A-REEL
327 WEST FOURTH STREET
CINCINNATI 2, OHIO

IEN-3629

FISHER *Gram-atic* BALANCE

A NEW, DIRECT-READING ANALYTICAL INSTRUMENT

- Fast weighing 20 seconds
- No weights to handle
- Beam under constant load
- One-step reading
- Constant sensitivity
- Completely automatic below 100 milligrams



weighs in one-third the time required by the usual balance.

Turn control knobs to select suitable weights. Corresponding figures appear on the direct reading scale.

Weights under 100 milligrams are indicated automatically.

The Gram-atic Balance weighs samples up to 100 grams. $885 each

Write for Bulletin 72

Weight is read directly on indicator

Manufactured for Laboratory Supplies by

FISHER SCIENTIFIC CO. — **EIMER AND AMEND**

IEN-3630

KEEP YOUR DOORS *closed* when not in use

NP PRE-ENGINEERED *Pneumatic* **DOOR OPERATORS**

SPEED UP material handling . . . isolate dust, fumes and fire hazards . . . reduce costs of air-conditioning and heat . . . increase productive time of employees, with N. P. air-powered Door Operators. They embody the same dependable N. P. Air Engines used to open and close the car doors of the great metropolitan subways throughout the world.

Write for Bulletin DC-102

NATIONAL PNEUMATIC CO., INC.
INDUSTRIAL DIVISION
Boston • Graybar Bldg., New York • Chicago

Pneumatic Specialists Since 1904

IEN-3632

Write for this new *Bulletin* TODAY

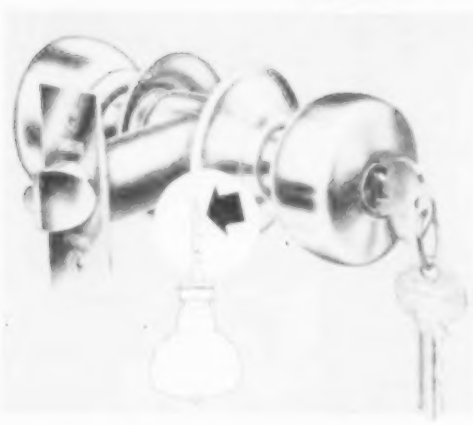
Get the facts on how you can save on

DRUM CLOSURES

IEN-3633

National

Retaining Rings *cut costs again!*



This handsome new Dodge, offered by Sargent and Company of New Haven, Conn., is the result of many years of engineering research.

Its simplicity, sturdy safety, sense of application and beauty of design assure a constantly increasing demand. Because of the skill with which fine precision parts are built into this greatly simplified lock it requires only six exceptionally small cross bars.

By using National retaining rings Sargent saves material, weight, spare tool capacity time—without sacrificing efficiency or strength.

Examine your products—metal, wooden or plastic. Many products as well as many machines can be redesigned to use retaining rings. Groove your shafts instead of wasteefully cutting down larger shafts to form shoulders. And groove your housings too.

The high grade steel rings insure greater savings and greater margin of profit.

Let us show you how retaining rings can do as efficient job for you. These inexpensive efficient combined shoulders save time, save weight, save space, save materials, save money.

Write today for "Designers Folder" of many types of National retaining rings.

THE NATIONAL LOCK WASHER CO.

NEWARK 5, NEW JERSEY • MILWAUKEE 2, WISCONSIN U.S.A.

IEN-3635

SWITCH . . Pressure operated to protect against lubricant failure

Source: PENN ELECTRIC SWITCH CO.
Thomas & Penn Sts., Goshen, Ind.

Two pressure bellows [illegible]

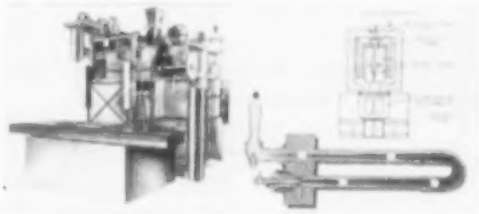
As long as [illegible]

A time delay [illegible]

IEN-3636

HEAT TREATING . . Gas fired furnace for general controlled atmosphere work

Source: SURFACE COMBUSTION CORP.
2373-77 Dorr St., Toledo 1, Ohio



Gas-fired radiant tubes provide the heat required in this new heat treating furnace. Given [illegible] is being here presented [illegible]

The furnace has a heating zone about [illegible] in width by [illegible] in length and stands [illegible] in height. [illegible]

All Makers of Facts, but Be Sure, Products Are Listed in JOURNAL REGISTER Descriptions Ratings See Page 56

IEN-3637

Whatever the Job . . . Uniforms Look Better, Wear Longer, Made of

REEVES FABRICS

BOOST EMPLOYEE MORALE

save money, with uniforms of Reeves quality fabrics. Embossed collar tie-on, water and perspiration. Reeves fabrics wear longer and keep a crisp appearance even after repeated laundering. Write now for complete information for your industry.

*Reeves trademark [illegible]

REEVES BROTHERS, Inc.

54 WORTH STREET, NEW YORK 13, N. Y.

IEN-3638

Get these facts on the one fluid strainer.

that will last as long as the equipment it's installed on

For longest service, no replacement, put Cuno AUTO-KLEAN—the only disc type self-cleaning strainer—on your fluid line. It's all metal, non-collapsible, permanent.

Guaranteed to remove all particles larger than specified.* Continuously cleanable — no need to stop flow. Single unit handles full flow in same space as usual partial flow type.

Widely used on lubricating, hydraulic, and fuel oils, water, and all industrial fluids.

*Available upon request from [illegible]

No Fluid Is Better than Its Filtration

CUNO

For valuable information on fluid straining, address Cuno Engineering Corp., 455 South Vine Street, Meriden, Connecticut.

Fluid Conditioning

Removes More Sizes of Solids from More Types of Fluids

IEN-3639

Can be reused and replaced time after time without injury to the hose clamp, nut or bolt.

Clancy Sure-Grip Clamps have sharp edges hold any pressure the hose will stand. All parts automatically galvanized . . . not rough edges, easily cut or crack. For air, gas, water or steam. Force size to fit any hose. Range is domestic. Write for prices.

IEN-3640

SAVE SPACE!

Fold Many in Same Space!

Extremely rugged, durable, easily collapsed or erected. Ideal for shipping, storage, or return.

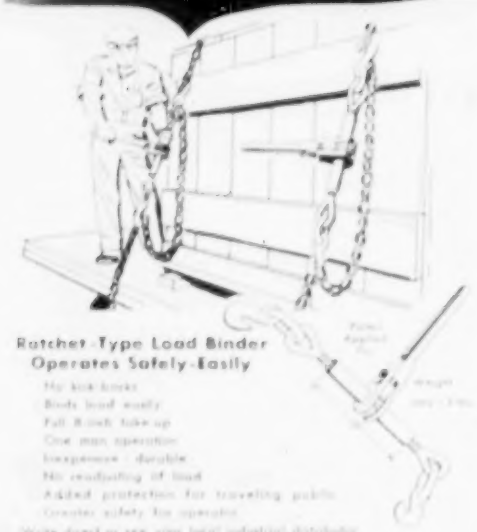
New Collapsible Truscon Steel Box

TRUSCON STEEL COMPANY

FREE BOOK! Describes complete line of Truscon Steel Boxes and Crates for materials handling.

▼ SAFETY—Identify by IEN-3641 if you write the maker ▼

A NEW Standard for LOAD-BINDERS



Ratchet-Type Load Binder Operates Safely-Easily

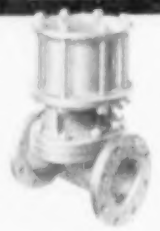
- No kick-backs
- Binds load easily
- Full 8-inch take-up
- One man operation
- Inexpensive · durable
- No readjusting of load
- Added protection for traveling public
- Greater safety for operator

Write direct or see your local industrial distributor

American FORGE AND MANUFACTURING CO.
812C Shady Avenue · Pittsburgh 12, Pa.

▼ SAFETY—Identify by IEN-3642 if you write the maker ▼

Here's an air actuated valve with the air cylinder built right into the bonnet!



It saves a lot of head room in keeping you from installing air cylinder operated valves the new Hills-McCanna Model 2150 Valve is the answer to your problem. The air cylinder is built right into the bonnet—the piston rod of the air cylinder serving as the valve stem.

You get the proved advantages of Hills-McCanna Diaphragm Valves—diaphragm valve design with compact air operated assembly.

Write for full details and specifications. HILLS-McCANNA CO. 1907 W. Nelson St., Chicago 13, Ill.

Check THESE FEATURES

HILLS-McCANNA *Diaphragm Valves*
Remote operation with air and water cylinders, diaphragm motors or gear motors by manual or automatic control.

▼ SAFETY—Identify by IEN-3643 if you write the maker ▼

Send for Panel Bulletin 51K

Positive Contact Plugs and Jacks permit 60 thermocouple "equivalent" of location, to be selected and switched to any of 30 Pyrometer recording points. Write your Thermocouple Circuits require flexibility of connections or new length leads, let us help you.

Thermo ELECTRIC CO.
FAIR LAWN, N.J.

▼ SAFETY—Identify by IEN-3644 if you write the maker ▼

INDEXING . . Dividing head positions work on machine tool table

Source: MARVIN MACHINE PRODUCTS INC.
412-16 Ford Bldg., Detroit 26, Mich.

List is about $190 for this new trunnion-mounted dividing head, its companion tailstock and three interchangeable index plates, each with six sets of holes. Overall dimensions of the head are 3 by 4 by 4 inches. The tailstock measures 2½ by 3 by 2½ inches. Base to centerline is 2½ inches.

The head swivels from 5 deg. below horizontal to 20 deg. beyond vertical. It carries a spindle with a No. 2 Morse taper and 1-in. 10-thread nose. Turning ratio is 40 to 1 between the spindle and the index crank. The tailstock center has 1-in. of axial adjustment.

▼ SAFETY—Identify by IEN-3645 if you write the maker ▼

PAINTING . . White and clear liquids to seal and coat masonry surfaces

Source: RUST-OLEUM CORP.
P. O. Box 110, Evanston, Ill.

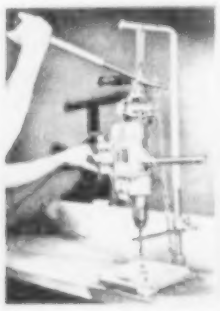
For surfaces not subject to traffic

Surfa-Seal No. 215 white and **Clear-Seal** No. 232 water-white are two new liquid materials for brush or spray application on masonry surfaces. Application seals the surface and imparts a smooth finish. Drying is in 2 to 3 hours. Application requires preliminary removal of all old sealing material down to a clean surface. This surface need not be dry to take the new material which bonds permanently to it.

▼ SAFETY—Identify by IEN-3646 if you write the maker ▼

DRILLING . . Lever operated stand mounts ½ in. portable electric drill

Source: MELAMED-HOBBS INC.
1048-52 Builders Exchange Bldg., Minneapolis 2, Minn.



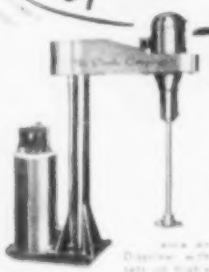
A cast iron base, about 12 by 12 in., a cheaper support column and expansion spring, a link connecting lever with clamp fittings for drill handle and a guide frame for the drilling tool make up this product stand. It is known as the Pony A Drill and is supplied with an standard ½ or ¾ in. electric drill.

The clamp fittings, chain and lever can be removed and replaced with a portable drill for holes in locations ordinarily difficult to reach.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 58

▼ SAFETY—Identify by IEN-3647 if you write the maker ▼

Dissolves or Disperses Up to 20 Times Faster



COWLES *Ultra-Fast* DISSOLVER

Years of research, practical experience and field test produced this ultra-fast Dissolver with the cone-designed impeller that sets up high velocity interface shear and produces perfect scrubbing action between the materials being blended.

The Cowles Dissolver is a specially engineered machine of rugged reliability made from the finest materials and equipped with ratio-efficient bearings, motors and other mountings. Every machine is tested out in actual operation before shipment.

Write for descriptive folder . . . or ask for a technical representative to call. No obligation.

Designed to your special requirements in dissolving or dispersing—
Liquids in liquids
Solids in liquids
Gases in liquids

The Cowles Company
INCORPORATED
114 TRACKSIDE, CAYUGA, N. Y.
Associates: Alexander Flock, Ltd., Ottawa, Ont.

▼ SAFETY—Identify by IEN-3648 if you write the maker ▼

ARE YOU LOOKING FOR BETTER LOCKS AT LOWER COST?

The Eagle Lock has lots of cabinet locks, is the answer for exceptional security at lower cost offering these exclusive features:

- **Double grooved key**
- **6 to 9 tumblers positively positioned by key**
- **Tumbler** controls cut in sides of key
- Exceptionally large number of key changes
- Carefully guarded key codes
- Ordinary duplication of keys not possible

For your security problems, Eagle can give you practical answer to fit a reduced cost program. We invite your security problems.

The EAGLE LOCK Company
Terryville, Connecticut

America's First Lockmakers . . . Since 1833

▼ SAFETY—Identify by IEN-3649 if you write the maker ▼

NEW . . .

Extremely sensitive
PRESSURE & VACUUM *Switches*

The new Type SB pressure and vacuum switches are for use in applications in which some small differential and absolute pressure measurements of air or gas are so critical that even the control of pressure or vacuum, these new two pressure models and two vacuum models. The Pressure Switches have adjustable ranges from 2 to 10 psi and adjustable on-off differential from 1 to 3 psi. The Vacuum Switches are adjustable, manually, vacuum range, or automatic for some other adjustment.

Each switch comes in 115, 230 v. AC between 50/60 cycle, and also with separate or common leads. The Vacuum Switches offer adjustable ranges from 20 in. Hg. up with adjustable on-off differential from 1 to 10 in. Hg. Switches are available in unmounted, mounted, vacuum tight, or mounted in some other adjustment. Electrical ratings of both models 1200 watts at 115/230 v. AC.

Special models available for magnetic mounting and tested to the specifications above.

Write for new Bulletin 4570-F giving complete details today.

UNITED ELECTRIC CONTROLS COMPANY
80 School Street
Watertown, Mass.

STANDARD & SPECIAL THERMOSTATS & PRESSURE SWITCHES

▼ SAFETY—Identify by IEN-3650 if you write the maker ▼

THE NEW FAIRWAY "CRYSTAL"

★ EXPENDABLE*
★ TRANSPARENT
★ LOW COST

"Here's an economical unit you discard when the tablet supply is exhausted—made of all-clear plastic with an easy, "one-fire" mechanism. Comes filled with 500 Enteric Coated salt tablets—tablets that prevent the distress caused by ordinary salt. This dispenser is sealed at the factory to protect the salt supply—a simplified wall mounting included with each unit.

For further information on the "Crystal" and the complete line of StaSafe and Fairway permanent type of dispensers—

WRITE FOR BULLETIN NO. 264

STANDARD SAFETY
EQUIPMENT COMPANY
233 W. ONTARIO · CHICAGO, ILLINOIS

REPRINT—Identify by IEN-3651 if you write the maker

it takes just 2 seconds to reach- and talk to anyone in your business with

ELECTRONIC AMPLICALL INTERCOMMUNICATION

Speeds Work

Cuts Costs

SEE YOUR CLASSIFIED PHONE BOOK

Just touch a button for instant speaking contact within and between all departments of your business. AMPLICALL takes the load off busy switchboards—puts an end to wasteful walking, waiting and shouting—speeds up and increases work output. Pays for itself quickly by converting waste wasted time into working time. Get the full details on AMPLICALL today!

Electronearing is our business

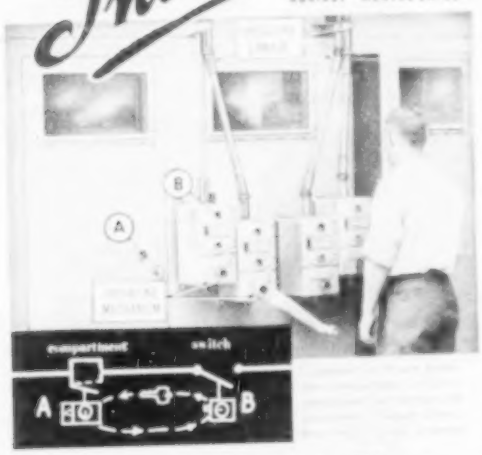
SOUND EQUIPMENT Rauland INTER-COMMUNICATION

RAULAND-BORG CORPORATION • 3333-K ADDISON ST., CHICAGO 18, ILL.

REPRINT—Identify by IEN-3652 if you write the maker

FOR SAFETY Interlock!

PROTECT MEN AND EQUIPMENT AGAINST MENTAL LAPSE



KIRK KEY INTERLOCK *System*

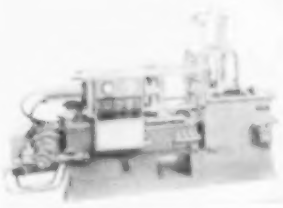
Ensures a predetermined sequence of operation—and prevents "mental lapse" which might cause damage to men and equipment.

RAILWAY AND INDUSTRIAL ENGINEERING CO.
NEWS STREET • • • GREENSBURG • PENNSYLVANIA

REPRINT—Identify by IEN-3654 if you write the maker

DIE CASTING . . Hydraulic machine rates 2.57 lb. in aluminum, 4 lb. zinc

Source: CLEVELAND AUTOMATIC MACHINE CO.
4930-4 Beech St., Cincinnati 12, Ohio



Model 50 is a new horizontal machine with interchangeable horizontal units to set up for aluminum or zinc production. Manual or automatic cycle control is available. Motor-driven hydraulic equipment is built in for self-contained assembly. Controls center at a panel set at top level at the operator's position.

The die plates measure 22 by 34 inches. The space is 4 to 15 in. and die opening is 8 inches. The die bars are 2 in. in diameter. Locking pressure is 50 ton. Floor space measures 116 by 52 inches. Free cycle time is 1,000 shots per hour.

REPRINT—Identify by IEN-3655 if you write the maker

MILLING . . Solid carbide cutters, range of patterns in sizes to 1/2 in.

Source: ATRAX CO.
238-42 Day St., Newington 11, Conn.

New line of milling cutters for wire, foil and sheet is available in solid carbide in a range of sizes and shapes. Standard or to fit to order. Regular diameter is 1/8 inch, overall length is 1½ to 2 inches. Recommended speed is two to three times that for high-speed steel cutts in a row. A note: Know that the speed should be about doubled.

REPRINT—Identify by IEN-3656 if you write the maker

METER . . Recording flow meter, differential pressure operates bellows

Source: BARTON INSTRUMENT CO.
1427-31 S. Eastern Ave., Los Angeles 22, Calif.

Model 202 is a new version of the company's line of recording flow meters. It is recommended for use where a differential pressure operates bellows, which automatically delays the pen from reacting to sudden surges. A differential pressure tends to the pressure rating of the manufacturer. The dampener controls rate of flow of the manufacturer fluid in the instrument from one bellows chamber to the other. The bellows also is capable proof to a design previously developed by the manufacturer. The mechanism contains a torque tube in the place of a passage-type bearing to eliminate friction and to hold the calibration.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER Descriptions — Ratings See Page 56

REPRINT—Identify by IEN-3657 if you write the maker

Built-In STAMINA

. . . ANOTHER REASON FOR THE "SUPER-LIFE" OF ATLAS CHAIN

The Atlas Sheath Process used for case hardening bushings and pins is one big reason for the success of Atlas "Super-Life" Chain. Hardening provides an outer surface strength based to the core of the steel which provides greater strength and wear resistance. The link plates and roller are also made of tough, heat-treated alloy steel.

Investigate today the chain that keeps on running after ordinary chain is out of service. Write ATLAS CHAIN and MANUFACTURING COMPANY, Kensington & Castor Avenues, Philadelphia 34, Penna.

"SUPER-LIFE"

ATLAS CHAIN

REPRINT—Identify by IEN-3658 if you write the maker

for accurate time control of almost any job!... GE TIME SWITCHES

TYPE T-47 HANDY TIME SWITCH. Ideal for quick time control on your business and this is for supplying the motor or heater control for your own equipment ON-OFF operation during all hours. Long day-times are available to permit a second ON-OFF operation. Offers easy setting from five minutes to 12 hours. Price $11.95.

TYPE T-47 PLUG is a quick flat way to control your job, and can be in Backyard and workshop equipment ON-OFF operation is also FOR refrigerator, dishwashing, for heater and motors. If you're not a gas fuel needs a clock operation timing, here's your best answer. From $11.95.

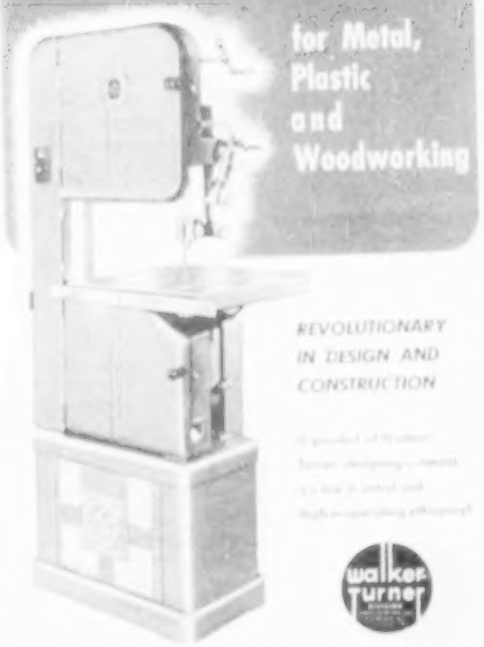
Both switches are operated by Telechronic motors and factory silver alloy contacts, and to touch with good GE distribution today, or write for Bulletins GEA-6363 (T-47) and GEA-6363 (T-47) Appliance Dept., General Electric Co., Schenectady 5, N. Y.

GENERAL ELECTRIC

REPRINT—Identify by IEN-3659 if you write the maker

NEW! WALKER-TURNER 16" BAND SAW

for Metal, Plastic and Woodworking



REVOLUTIONARY IN DESIGN AND CONSTRUCTION

walker turner

LOOK AT THE SPECIFICATIONS . . . COMPARE

Capacity: 16" between blade and frame—8" under guide
Guides: Upper and Lower, ball type
Frame: Heavy cast-iron construction for extra strength and rigidity
Bearings: 4 heavy duty precision ball bearings
Wheels: Cast aluminum, carefully balanced rubber faced
Table: Cast iron, 18" x 17", carefully machined
Guards: Cast aluminum, provide full protection

Single speed models for wood and plastic cutting. 3 blade speeds with standard motor 2,12,3000 feet per minute, with slow speed motor 1,24,3000 feet per minute.

SOLD ONLY THROUGH AUTHORIZED DEALERS

Walker-Turner DIVISION
KEARNEY & TRECKER CORP. PLAINFIELD, N.J., U.S.A.

KEARNEY & TRECKER MILWAUKEE
WALKER-TURNER DIVISION
PLAINFIELD, NEW JERSEY

SEE YOUR LOCAL DEALER
For complete technical data on the wood, metal, and woodworking machines in the complete Walker-Turner line, or mail coupon for catalog.

WALKER-TURNER DIVISION
Kearney & Trecker Corp. Dept. 12, Plainfield, N. J.
Please send me a copy of the complete Walker-Turner Catalog.
Name
Firm
Address
City Zone State

IEN-3661

EX-CELL-O *Spindles*

"STEPPED UP PRODUCTION TREMENDOUSLY!"

That's what an electrical manufacturer says about a group of Ex-Cell-O Precision Spindles he purchased. These were of the high frequency, inboard motor type, pictured above. If you use precision grinding spindles send for the Ex-Cell-O Spindle Catalog today—no obligation of course. For a quotation on special spindles just send a sketch with basic dimensions and state the speed and horsepower required.

XLO

EX-CELL-O CORPORATION
DETROIT 32, MICHIGAN

IEN-3662

In Any Location— A Quiet Spot for Telephoning

The modern, doorless Burgess-Manning Acoustic Booth provides a quiet spot for telephoning . . . in noisy locations anywhere. Thick walls of sound-absorbent material soak up noise. Conversations are clearer . . . "private."

ALSO
- Banks
- Bus Terminals
- Railroad Stations
- Utility Plants

MAIL COUPON FOR FREE BULLETIN BURGESS-MANNING COMPANY
743-A East Fort Ave., Louisville (Ohio)

Please send booklet describing Burgess-Manning Acoustic Booths.

Name _____ Firm Name _____

Street _____ City _____

IEN-3663

Answer These QUESTIONS to YOURSELF

1. Are you competitive price-wise?
2. Is your profit satisfactory?
3. Is 30% or more of your product's cost spent in material handling?

Industrial CRANES

Let us check your material handling and storage problems. We will be glad to recommend this service to you without obligation.

INDUSTRIAL EQUIPMENT CO.
321 NORTH ADA STREET CHICAGO 7, ILLINOIS
Write for Catalog. Representatives in Principal Cities.
OVERHEAD CRANES • JIB CRANES • MONORAIL SYSTEMS • CONVEYORS

IEN-3664

FILTERING . . Portable equipment for light solutions, corrosive fluids

Source: TITEFLEX INC.
593 Frelinghuysen Ave., Newark 5, N. J.

Series SEX . . . [illegible]

Construction . . . [illegible]

IEN-3665

DRILLING . . Portable electric tool rates 1/4 in. in steel, 1,100 rpm.

Source: STANLEY ELECTRIC TOOLS DIV.
478-82 Myrtle St., New Britain, Conn.

The tool . . . [illegible]

The drill . . . [illegible]

IEN-3666

PAINTING . . Seven interior colors to promote good seeing and worker safety

Pittsburgh Div.
2214 Sylvan Ave., Toledo 6, Ohio

Daylight Color System . . . [illegible]

All Makers of Items And All Other Products Are Listed In THOMAS' REGISTER . . . Descriptions . . . Ratings . . . See Page 16

IEN-3667

TRIPLE PURPOSE MACHINE

FILES . . . SAWS . . . STONES

ILLINOIS DIE FILING MACHINE

An accurate, smoothly-operating machine that files, saws and stones the most intricate die shapes . . . eliminates tedious hand operations . . . reduces costs. It is quality-built for long, trouble-free service . . . hardened and ground shafts running in bronze bushings minimize wear. The holding chuck and clamping device provide perfect file alignment.

Sawing

Write for descriptive literature

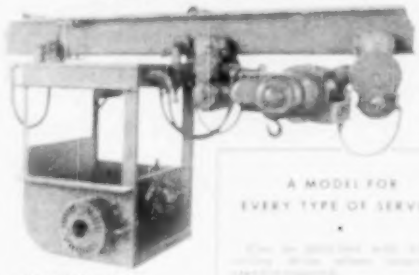
Stoning

ILLINOIS TOOL WORKS
2501 N. Keeler Ave. • Chicago 39, Ill.
MANUFACTURERS OF METAL CUTTING TOOLS AND SHAKEPROOF PRODUCTS

IEN-3668

For "Long Haul" Economy

CAPACITY 500 POUNDS TO 20 TONS



HOISTING UNIT— . . . [illegible]

A MODEL FOR EVERY TYPE OF SERVICE

Shepard Niles CRANE & HOIST CORPORATION
456 SCHUYLER AVE. • MONTOUR FALLS, N. Y.

IEN-3669

Here's How You Save Time and Money with Townsend Fasteners and Parts.

Savings $11.28 per 1000

The items shown here are examples of how others, through slight changes in

Savings $ 1.23 per 1000

design or by switching from expensive screw machine items to Townsend cold

Savings $ 5.54 per 1000

headed fasteners and parts have improved their product, speeded operation

Savings $ 4.40 per 1000

and cut costs. To check your costs send us samples or sketches and we will

Savings $ 2.04 per 1000

suggest how you get better parts faster, for less money from Townsend. Write

Townsend
COMPANY — ESTABLISHED 1916

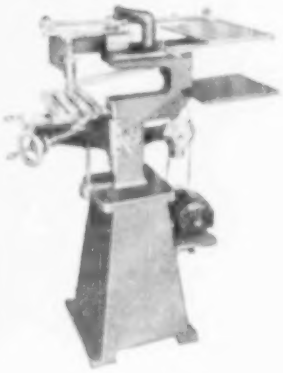
New Brighton, Pa.
Chicago 38, Ill.

IEN-3671

IEN-3674

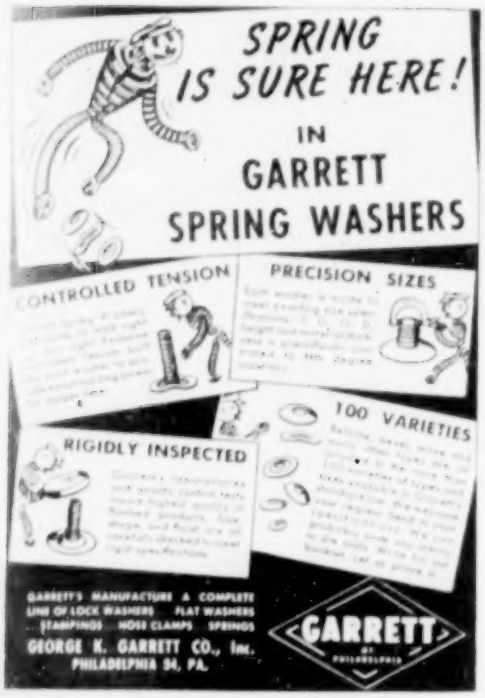
ENGRAVING . . Pantograph machine for two-dimensional work, is adjustable

Source: H. P. PREIS ENGRAVING MACHINE CO.
663-D Highway 29, Hillside, N. J.

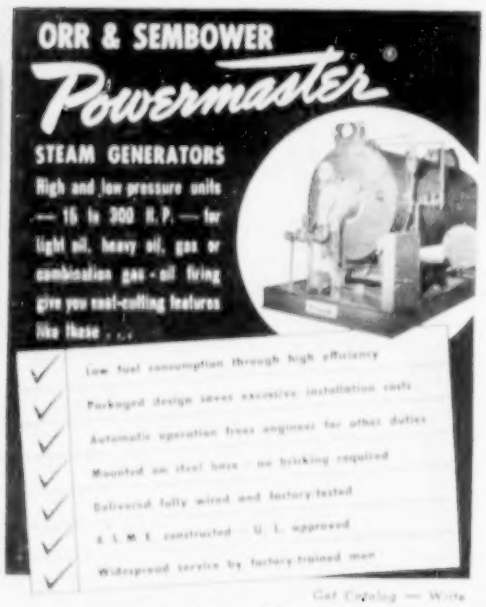


Range of [illegible] Model 2D Pantograph Engraver is from 1 to 1 to [illegible]. The ball-bearing pantograph assembly is graduated for indicator settings at 1 to 100. The work table measures 6 by 22 in. and has [illegible] tools for holding [illegible] workpieces, as 5/16 in. wide crown [illegible] wood inches. Work measuring 8 in. [illegible] 10 in. [illegible] height [illegible] the [illegible] cloth. The cups follow [illegible] to 1/2 in. [illegible] and [illegible] 1/2 in. [illegible] and [illegible] 1/2 in. [illegible] 1/2 in. [illegible] 1/2 in.

BRIEFITT—Identify by IEN-3680 if you write the maker



BRIEFITT—Identify by IEN-3681 if you write the maker



BRIEFITT—Identify by IEN-3682 if you write the maker

MANUFACTURERS LARGE OR SMALL

INDUSTRIAL WHEELERS

. . . SERVE THEM ALL!

MINNEAPOLIS-MOLINE
MINNEAPOLIS 1, MINNESOTA

BRIEFITT—Identify by IEN-3683 if you write the maker

GAGE . . Electronic instrument reads vacuum in microns of mercury

Source: HASTINGS INSTRUMENT CO.
P. O. Box 1275-A, Hampton, Va.

New gage supports a table metal thermopile and bridge circuit and operates on 110-volt ac. It applies a small pickup that threads into a 3/8-in. opening in the vacuum line to actuate the indicator, which reads in a range between 1 and 1,000 microns of mercury. The instrument is designed for use in vacuum tube manufacture, vacuum distillation, refrigeration, services, vacuum dehydration and general laboratory operations in which high vacuum is involved. List price with the pickup is $161. The gage alone is $94 when specified without the pickup.

BRIEFITT—Identify by IEN-3684 if you write the maker

BEARING . . Miniature ball assembly employs retainer, measures 1/4 in. od.

Source: NEW HAMPSHIRE BALL BEARINGS INC.
1 Granite St., Peterborough, N. H.

No. R-1-1 is a new miniature ball bearing with a Conrad nylon-type retainer to hold the six ground steel balls in correct spaced positions. Races are hardened and ground. Dimensions are 1/4 in. outside diameter, 3/8 in. in width, 3/32 in. in bore diameter. Both inside and outside diameters are held to plus zero, minus .0002 inch.

BRIEFITT—Identify by IEN-3685 if you write the maker

SOLDERING . . Electric iron with illuminated single point electrode

Source: CALIRI MFG. CO.
43-47 Washington St., West Orange, N. J.

Cal-98 is a new twin-heat electric iron with double trigger control to select operation at 100 or 150 watts from the 110-volt 60-cycle line to which the unit connects. Operation is through a transformer to the single-point electrode which is proportioned to get into confined locations. A light in the head above the electrode illuminates the spot working area. Weight is 1½ pounds. List price is $15.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . Descriptions . . Ratings . . See Page 50

BRIEFITT—Identify by IEN-3686 if you write the maker

BRIEFITT—Identify by IEN-3687 if you write the maker

TOUREK BALL JOINTS and SCREW MACHINE PRODUCTS

Many manufacturers find that in Tourek's wide range of standard Ball Joints there is a type and size which meets their exact requirements. You, too, can simplify the design and improve the performance, as well as reduce the cost of your products by specifying standard Tourek Ball Joints. Our large stock assures prompt delivery.

Or, if you are planning a new product calling for special Ball Joint design, call upon Tourek for experienced advice.

Write for Tourek's 16-page illustrated catalog containing complete specifications on 12 standard types in 34 sizes as well as data on special types.

Your screw machine product requirements, when produced at Tourek, are the result of coordinated engineering know-how, the latest in modern high-speed turnpoint automatics, skilled operators, plus 28 years of experience.

Your production parts, from 3/16" to 2 3/4" are made with the utmost precision and delivery is assured according to schedule.

An inquiry on your screw machine product needs is invited. Send a blueprint or sample for quotation.

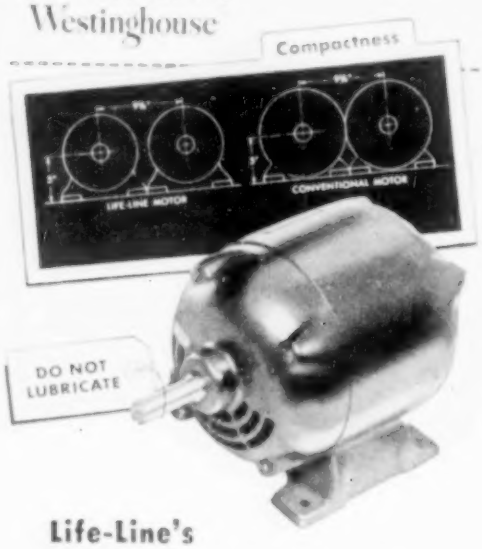
MAKERS OF QUALITY SCREW MACHINE PRODUCTS

J. J. TOUREK MFG. CO.
4701 W. 16th St., Chicago 50, Ill.

ESTABLISHED 1920
TOUREK
FAMOUS BALL JOINTS

BRIEFITT—Identify by IEN-3688 if you write the maker

YOU CAN BE SURE . . IF IT'S Westinghouse



Life-Line's space-miser compactness

SAVES PRODUCTION COSTS

Here's how a Life-Line comes through in a pinch. One manufacturer using conventional motors was forced to crowd two motors together, which meant removing a thin slice of cast iron from each motor frame.

A designer saw the all-steel Life-Line. Result: A step saved in manufacturing. Life-Line's ½ smaller size for the same frame size and h.p. rating, fits easily with room to spare.

This compactness is a valuable asset when your design allows only limited space for the motor drive. In addition, Life-Line "needs no further lubrication".

Get all the facts. Ask your Westinghouse representative for a copy of B-3482, or write Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Penna. 3-2-2

If you figure LIFE-COSTS . . . you'll figure LIFE-LINE

Westinghouse Life-Line Motors

INDUSTRY'S LEADING MOTOR

▼ REPRINT—Identify by IEN-3690 if you write the maker ▼

Are you paying too much for threaded fasteners in tonnage purchases?

TRIPLEX prices are RIGHT!

Write or wire your requirements

The TRIPLEX SCREW Co.
5311 Grant Avenue
Cleveland 5, Ohio

TRIPLEX for TOUGHNESS

CAP AND SET SCREWS · BOLTS, NUTS AND RIVETS

▼ REPRINT—Identify by IEN-3691 if you write the maker ▼

FABRICATED SCREENS STRAINERS

TO YOUR SPECIFICATIONS

• PRODUCTION RUNS

• HIGH QUALITY

NEWARK offers a "complete package" service in the design and manufacture of fabricated woven wire parts. We design and manufacture screens and strainers for all types of service: for handling oil, water, gasoline, air, corrosive gasses or steam.

We manufacture the wire cloth, thus insuring its accuracy; we also do all the necessary cutting, forming, soldering, stamping, punching, welding and seaming. In other words, it's a NEWARK job from start to finish.

Newark Wire Cloth COMPANY

342 Verona Avenue · Newark 4, New Jersey

NEWARK for ACCURACY

▼ REPRINT—Identify by IEN-3693 if you write the maker ▼

TESTING . . Vacuum machine tests housing parts for air leakage

Source: WHITTINGTON PUMP & ENGINEERING CORP.
1124-26 Prospect St., Indianapolis 3, Ind.

Castings is common-metal parts that are being manufactured in mass quantity can be found for the test equipment to assure the soundness of machine or to prevent those that have minor defects. The machine consists two test stations, one on each side at which work is generously placed under test pressure. In the center is an instrument panel where green lights signal good parts and red lights indicate failures. A test cycle at each station takes 45 seconds. The machine measures 6 ft. by 3½ ft. long.

The work is gripped and pressure is operating a vertical pneumatic cylinder at each station. Fixtures are designed and applied for a given work piece to suit all of the requisite operations which cylinder pressure is applied. A vacuum pump driven by a 5 hp. motor in the machine housing supplies the required test pressure to the work and electricity is by a four chamber heater to heat light. If the work is right then the two pressures are released and the green light will signal. If there is any air leakage into the work the test pressures will be part of leaving another the other to the red signal light. The machine is built to specifications for good work and production requirements.

▼ REPRINT—Identify by IEN-3694 if you write the maker ▼

TESTING . . Acidity testing kit for transformer and lubricating oils

Source: GERIN CORP.
P. O. Box 653-A, Red Bank, N. J.

List price is $75 for this test portable oil pack which is determination of a transformer oil or a lubricating oil as employed in a turbine or engine, has passed an acceptability limit for acidity as an indicator of oxidation. The test will indicate point of treatment for the oil before it reaches the sludge-forming stage.

The assembly consists of four graduated glass cylinders, to make four tests at one time if this is desired, firmly sealed ampoules of neutralizing LIME of which two are 2 mg. and two are 0 mg. strength, two pints of neutral water alcohol solution with pink indicator and operating instructions. These are all contained in an oak carrying case that measures 8½ by 7 by 7½ inches. Additional ampoules are 50 cents each in lots of 100. The indicator solution is 55 cents per quart.

Oil is poured into a cylinder to mark 50 to make a test. The neutral indicating solution is added to mark 50 and then one of the ampoules is broken open and added. If the result shows pink after shaking the oil passes the test satisfactorily. If the pink did does not show the acidity exceeds the value of the ampoule and indicator used for treatment.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 10

▼ REPRINT—Identify by IEN-3695 if you write the maker ▼

The WILLIAMS-HAGER flanged *Silent check* VALVE

the economical, practical solution to costly **WATER HAMMER**

With its renewable disc and seat, non-wearing control spring, the Williams-Hager Valve offers dependable performance in any position—horizontal, vertical with upward, vertical with flow downward and angular. Easily installed. Easily adjusted or removed without spoiling line. Sizes 1" to 20".

- durable
- compact
- accessible
- low friction

Write for Bulletin WH 100

THE WILLIAMS GAUGE CO.

Pump Valves · Water Gauges · Gauge Cocks · Steam Traps · Pump Governors · Feed Water Regulators · Water Columns

2900 PENNSYLVANIA AVE. · PITTSBURGH (12), PA.

▼ REPRINT—Identify by IEN-3696 if you write the maker ▼

We have the answer for stopping damage to wood caused by

ROT and TERMITES

At vulnerable points on your next building or remodeling job use Wolmanized Pressure-Treated Lumber.

Wolmanized Lumber actually kills rot and termites. It's clean, odorless, paintable—and service records prove that it lasts 3 to 5 times longer than untreated wood.

The extra cost of using Wolmanized Lumber is less than the labor and costs of replacing prematurely failing untreated wood. Find out more about this money-saving, longer lasting treated lumber.

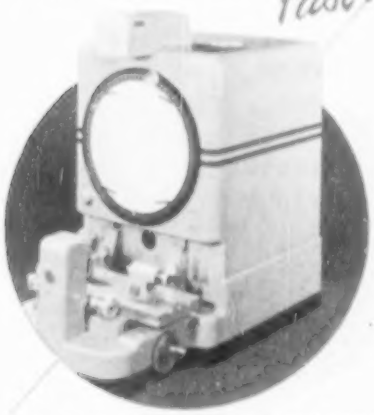
THIS FREE BOOKLET SHOWS YOU WHERE AND WHY TO USE WOLMANIZED LUMBER

Write for your copy today

AMERICAN LUMBER & TREATING CO.
112 S. Michigan Ave. · Chicago 3, Illinois

▼ REPRINT—Identify by IEN-3697 if you write the maker ▼

For Complete Inspection under Magnification—*Fast.*



the Kodak **CONTOUR PROJECTOR**

SHOWS contours, of course, surface details . . . deep, blind holes

▶ Write for full details of this moderately priced precision instrument for fast inspection.

EASTMAN KODAK COMPANY
Industrial Optical Sales Division
Rochester 4, N. Y.

Kodak

▼ DIRECT—Identify by IEN-3699 if you write the maker ▼

every style and type

Rubber Bumpers

What do you need?

Largest and most varied stocks in the U.S.A. UNUSUAL STYLES to meet every demand. Low cost and prompt delivery assured.

FREE 44 PAGE CATALOG

Take it up with

CAVELLE Rubber Company

1811 WEST HUBBARD STREET, CHICAGO 22, ILLINOIS

▼ DIRECT—Identify by IEN-3700 if you write the maker ▼

How to Give Bad Air the *BIG PUSH*

Swartwout Ject-O-Valve forces heat and fumes through your roof

Keep your factory workrooms workable! Use this big Swartwout Roof Ventilator with its powerful propeller fan over all concentrated heat, fume, smoke areas. Completely weatherproof. Various sizes, capacities. Bulletin 1100 describes Jet-O-Valve and other Swartwout designs. 18811 Euclid Avenue, Cleveland 12, Ohio.

The Swartwout Co.

Industrial Ventilation Specialists Since 1904

Equipment for *Controlled* Air Circulation

▼ DIRECT—Identify by IEN-3701 if you write the maker ▼

KNOCKOUT

What specie are these terms?

1. Dizzy Coffee
2. Coffin Cocoa
3. Rabbit Punch
4. Lock All
5. Ark
6. Texas Gangster
7. Chicken
8. Flying Mare

Answers below this ad

What's wrong with this picture of a professional heavyweight boxer?

Knock out the dust problem in your plant with

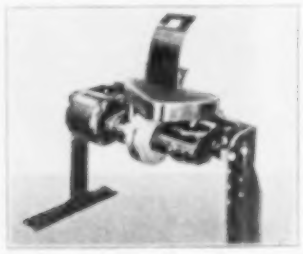
TORIT DUST COLLECTORS

TORIT Manufacturing Co.

▼ DIRECT—Identify by IEN-3702 if you write the maker ▼

PRESS TOOLS . . Scrap cutter mounts on floor beside a press

Source: DURANT TOOL SUPPLY CO.
153-57 E. Grange St., Providence 3, R. I.



Model 100 is a new and larger assembly to the company's line of scrap cutters, previously described IEN 8254-49. Production capacity is 6 in. in width and .025 in. in thickness has been increased to 6 by .125 inch. Strip-scrap feeds from a press to cutter by a curved guide that directs it downward through the machine. A 5-hp. motor beneath the base drives a working cutter arm to rotate, action with a worm reducer to cut the strip into short pieces that will fall through unobstructed gap formed between the three support legs. The motor shaft is the one model carries a flywheel to smooth the peak loading load. List price is $395.

▼ DIRECT—Identify by IEN-3703 if you write the maker ▼

CALCULATING . . Slide rule for problems in quality in production

Source: PICKETT & ECKEL INC.
1109-13 S. Freemont Ave., Alhambra, Calif.

New slide rule provides a means to quickly solve problems that involve quality in production as adopted by ASA in its standard No. Z1.3. It is accompanied with an instruction manual to cover certain of its applications. Overall dimensions are 13 by 3 in. in back. Weight is about 4 ounces. Construction is based on a triple scale type. List price is $12 with a $10 case and the manual provided, postpaid.

▼ DIRECT—Identify by IEN-3704 if you write the maker ▼

MANAGEMENT . . Labor relations the subject of new booklet by the AMA

American Management Association
330 W. 42nd St., New York 36, N. Y.

Booklet 131 is the Association's Personnel Series, a "Good Working Issues in Collective Bargaining." It has 40 pages, sells at $1. It covers a point-by-point summary of grievances and complaints presented and other matters of interest to labor-management relations in the office of many Southern plants, as compared and a second point summary of similar Good Grievance Issues of the grievances and complaints presented.

All Makers of These And All Other Products Are Listed in THOMAS' REGISTER — Descriptions — Ratings — See Page 10

▼ DIRECT—Identify by IEN-3705 if you write the maker ▼

get AGASTAT

Readily adjustable—instantaneously recycling—wide variety of applications. *Write for literature.*

AGA AIRPORT LIGHTING · AGA · AGA · AGA · AGA

AMERICAN GAS ACCUMULATOR COMPANY
1027 Newark Avenue • Elizabeth 3, New Jersey

▼ DIRECT—Identify by IEN-3706 if you write the maker ▼

CASE HISTORIES

Show how AUTOMATIC *Electric* TRUCKS Cut Handling Costs in HALF!

ELECTRIC APPLIANCES
Unloading Radio Cabinets

METAL PRODUCTS
Handling Tinplate

Why don't YOU save this kind of money?

Read these case histories. They are typical of many in our files. YOU can save that kind of money too, no matter what your product.

Whether it's the Transporter that lifts and moves one or two materials at a time, or the Transtacker or Automatic Stacker Electric Trucks that stack as well as lift and move material, these heavy-duty electric trucks save you costly man-hours, pay for themselves in as little as months.

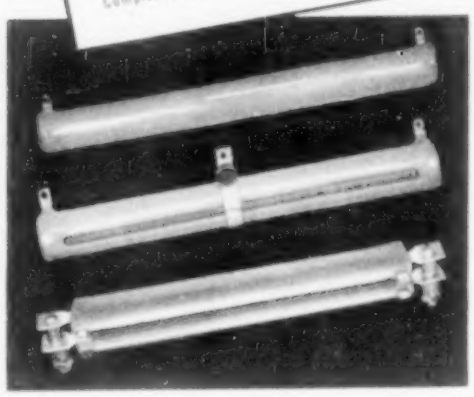
Daily battery charging costs amounts to pennies, not dollars—maintenance cost, too. Get FREE CATALOG, "How to Make Your Material Handling Pay Dividends" with more case histories of savings in companies like your own. Write today to:

Automatic Electric Truck Co.
100 West 67th Street
Dept. IN-5 Chicago 21, Illinois

Automatic ELECTRIC TRUCKS

▼ DIRECT—Identify by IEN-3707 if you write the maker ▼

HARDWICK, HINDLE
PROUDLY ANNOUNCES ITS NEW
NATIONAL RESISTORS
Completely Sealed · Completely Satisfactory



✓ the core is wrapped, and has higher resistance to vibration and shock.

✓ the resistance wire, made to R.H. specifications especially adapted to these resistors, is more uniformly wound on the ballastic mica strip and cleanwound.

✓ the special alloy terminal, not mere copper, fastened to the ceramic body by "pressfitting" highly resistant to corrosion.

✓ all wire connections are protected by a positive, non-corrosive bonding.

and . . .

✓ New, life-size wound winding procedure, thermoshock proof grey ceramic protection throughout the most rugged service. Range 10 under resistance of humidity, salt water and severe atmospheric conditions. And for withstanding higher heat these resistors offer a greater safety factor.

✓ The fixed, the variable and the flat types are especially designed for and manufactured in accordance with JAN-R-26A specifications. Write today for new bulletin.

HARDWICK, HINDLE, INC.
Rheostats and Resistors
Subsidiary of
THE NATIONAL LOCK WASHER COMPANY
ESTABLISHED 1886
NEWARK 5, N. J. U.S.A.

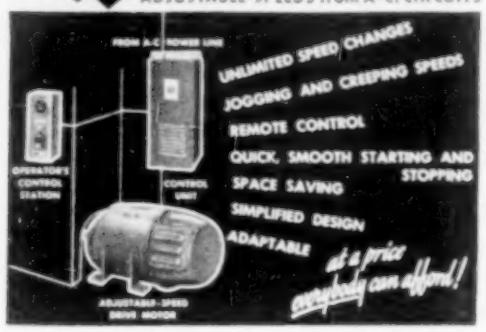
▼ REPRINT—Identify by IEN-3709 if you write the maker ▼

RELIANCE V★S DRIVE

NEW!

for Thousands of Additional Applications of

ADJUSTABLE-SPEEDS from A-C. CIRCUITS



• Here is a simple, space saving, low cost All-electric Adjustable-speed Drive utilizing the same fundamental principles engineered in the design of Reliance Reliance V★S Drives for over 11 years. Machine builders or machine users will pay you to have all the facts on this important development of the V★S line. Write now for Bulletin B-1101.

RELIANCE ELECTRIC & ENGINEERING COMPANY
1072 EVANHOE ROAD CLEVELAND 10, OHIO

Sales Offices in Principal Cities

▼ REPRINT—Identify by IEN-3710 if you write the maker ▼

MATERIAL HANDLING NEWS

IT'S NEW!
It's Different!
It Tows Ten Tons!

The CLARKETTE-5

At light and laugh at a bantamweight champion, tired towing trailer for order selection and similar warehouse operations requiring frequent starts and stops for loading and unloading small individual items.

NOTE THESE REVOLUTIONARY FEATURES:

- Getting on and off is as easy as taking a normal step—because the driver stands.
- A seat extending across the machine above the axle is a combination clutch and throttle control. This permits safe and easy operation whether driver is on the machine or walking beside it, on easier side, regardless of hazards and foes.
- Tested, rebuilt and proved in almost a year of actual use in 10,000 selected work. Dependable, practical, compact and economical. Users will find it "a real asset" for doing heavy dirty chores now performed by less efficient and more expensive means.
- Complete facts and figures are presented in new literature which is yours for the asking.

A good idea! MAIL THIS HANDY COUPON ...TODAY

CLARK ELECTRIC AND GAS POWERED FORK TRUCKS AND INDUSTRIAL TOWING TRACTORS

CLARK EQUIPMENT COMPANY

▼ REPRINT—Identify by IEN-3712 if you write the maker ▼

SWITCH . . Multiple assemblies for machine control and indicating

Source: WESTINGHOUSE ELECTRIC CORP.
306 Fourth Ave., P. O. Box 1017, Pittsburgh 30, Pa.

Hit The [illegible] a new line of push button switches, [illegible] pilot lights, [illegible] in which the [illegible] are available. Shown [illegible] pilot lights [illegible] operators, [illegible] pilot lights

▼ DEFECT—Identified by IEN-3718 if you write the maker ▲▼

PROMPT SPEEDY DELIVERY OF

UNIVERSAL DRILL BUSHINGS

You will receive prompt speedy delivery of any size Universal Drill Bushings to any point in the United States—orders for standard size bushings will be filled and shipped within 24 hours—because our warehouses are so located and stocked as to give excellent service without delay. Order by teletype, phone, wire or letter from your nearest Universal warehouse at 1000 Broad Street, Newark, N. J., 5015 6th Ave., Kenosha, Wis., or Frankenmuth, Michigan.

UNIVERSAL ENGINEERING COMPANY
FRANKENMUTH 6, MICHIGAN

▼ DEFECT—Identified by IEN-3719 if you write the maker ▲▼

FANS

for Every Air-Moving Job!

It will pay you to fan-plan with America's most complete line of direct and belt-drive Exhaust Fans, Air Circulators, Ceiling Fans, and Ventilators . . . built to give you more service with less overcrowd! Select the fans you need now. Prepare for the hot months ahead.

See your electrical contractor, or write today for your free guide to the selection of Exhaust and Ventilating Equipment. Bulletin No. 555.

THE EMERSON ELECTRIC MFG. CO.
St. Louis 21, Mo.

EMERSON ELECTRIC
MOTORS • FANS — APPLIANCES

▼ DEFECT—Identified by IEN-3720 if you write the maker ▲▼

Tempilstiks°

The amazing Crayons that tell temperatures

in
WELDING
FLAME CUTTING
TEMPERING
FORGING
CASTING
MELTING
DRAWING
STRAIGHTENING
HEAT TREATING
IN GENERAL

available in many temperatures (°F)

$2 each

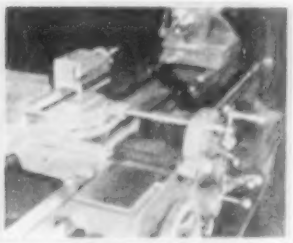
FREE — Tempil° Basic Guide to Furnace Metallurgy

NAME
COMPANY
ADDRESS

▼ DEFECT—Identified by IEN-3721 if you write the maker ▲▼

LATHE ATTACHMENT . . Rotating head mounts on carriage for spherical work

Source: MONARCH MACHINE TOOL CO.
613-17 N. Oak St., Sidney, Ohio



New head mounts on the cross slide just on the front of the carriage of the machine. The head carries a tool with tool axis in horizontal plane, adjustable in the usual manner of head rotation for turning or boring.

A crank at the front is mounted on a bracket on the carriage and engages through a worm gear and bevel segment. A spring-loaded ball engages in notches in the head to lock it in any desired position. A tool of 1 in. sq. or less can be used with this attachment.

A ball [illegible] in diameter with the bearing on a socket for 1 in. round stock. The tool holder, 2 in. wide, takes tool capacity up to 1/2 in. high, or a 1 in. socket. The drive center will take up to a 1 in. bar, or up to the same diameter. Equipment can be furnished with the same tools and holder.

▼ DEFECT—Identified by IEN-3722 if you write the maker ▲▼

WELDING . . Arc electrode to make machinable welds in cast iron

Source: GENERAL ELECTRIC CO.
Dept. 6X-201, Schenectady 5, N. Y.

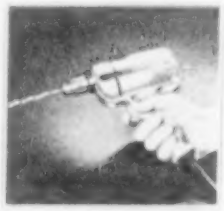
Color matches base metal

Nickel-rare wire and an exclusive black coating make up a new Type W-397 electrode for all position welding on [illegible] Single Groove Prime 1/8 to 5/8 inch. Use 1/8 in. 70 amps. For the most part, 120 to 300 amps. for the [illegible] 5/32 to 1/4 in. [illegible]

▼ DEFECT—Identified by IEN-3723 if you write the maker ▲▼

DRILLING . . Portable electric tool with hand-fitted handle, rates 1/4 in.

Source: SKILSAW INC.
5039 Elston Ave., Chicago 30, Ill.



Model 19 is a new unit in the Skil Drill line of portable electric tools. It features a [illegible] handle that fits the worker's hand to make a unique in-constant use. The tool measures 7½ in. in overall length. It weighs 3½ pounds. For universal motor operation on 110 volt ac or dc, with other voltages to order.

Assembly is by ball and needle bearings. Standard speed is 1,800 rpm, with other speeds higher and lower to specifications. It is sold at 86 over the list price of $33. Equipment includes a Jacobs chuck with key and holder and 30 ft. of [illegible] cord and [illegible] connector.

All Makers of Items And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 30

▼ DEFECT—Identified by IEN-3724 if you write the maker ▲▼

Handle Your Materials with lead-floating cost-cutting Colson Trucks

Colson Drum Truck model 2450-C, has ball-bearing 18" double-rim disc type wheels, demountable cushion rubber tires, staggered lightweight tubular steel frame. Climb truck rails with extension rails.

Write Today For Free 56 Page Catalog

More work handled with less effort and cost when your plant is equipped with Colson trucks. Hand trucks, barrel and drum trucks, platform trucks, fork trucks, lift-jack systems, dollies, wheels and casters—all designed for ease of movement, floor saving, extra durability. Less "work" means popularity with workers, profits for you. Write us or consult your phone book for the local Colson office.

THE COLSON CORPORATION
ELYRIA, OHIO
CASTERS • • LIFT JACK SYSTEMS • • INDUSTRIAL TRUCKS

▼ DEFECT—Identified by IEN-3725 if you write the maker ▲▼

Want to get rid of

STRAY ELECTRICAL CURRENTS?

B.C.P.* *may do it for you*

*BLACK CONDUCTION PAINT solved a very intricate problem of electrostatic corrosion for the Armed Services. . . . A manufacturer of television sets uses Black Conduction Paint to conduct away stray currents on television tubes. . . . A large electronics manufacturer found that it filled a long felt need.

B.C.P. is applied like any other paint, dries fast, has 200 hour salt spray resistance, good durability and adhesion.

B.C.P. may lick conductivity problems for you. Why not give it a try? Send us the details of your problem.

THOMPSON & COMPANY
1085 Allegheny Avenue — Oakmont, Pa.
ESTABLISHED 1887

▼ DEFECT—Identified by IEN-3726 if you write the maker ▲▼

STAINLESS STEEL FLOATS

Your product will be better, will require virtually no maintenance, if it is equipped with Chicago's stainless floats. In fifteen years of making welded stainless steel floats, Chicago Float Works has produced many thousands with excellent results under severe operating conditions. This enviable record assures you of the finest, most dependable floats available to build into your products or for replacement use.

CHECK THESE FEATURES

- Standard Diameters 2 to 10"
- Pressures to 1000 lbs.
- Temperatures to 800°F.
- All Standard Stud Connections
- Top-quality 18-8 Stainless Steel
- Non-corroded weld for superior strength, and corrosion resistance available where required

WRITE FOR FREE CATALOG

CHICAGO FLOAT WORKS, INC.
2326 So. Western Avenue • Chicago 8, Illinois

▼ DEFECT—Identified by IEN-3727 if you write the maker ▲▼

HOW TO TRANSFER FLUIDS FAST!

Air Operated—up to 18 GPM
Light Weight—only $54.50

You no longer need a big, heavy, high-priced pump to empty drums in a hurry . . . look at the new Graco Fast-Flo Pump. Weighs only 13 lbs. . . . air operated . . . delivers up to 18 GPM at 80 psi on 150 lbs. of air pressure. Delivers any of other fluids in direct proportion to their viscosity.

A Fast-Flo Pump will save valuable time every day transferring paints, thinners, lubricants, coolants, alcohols, naphthas, adhesives, non-corrosive chemicals and many other fluids. Fits all drums with 2" openings. Ask your jobber . . . or order direct.

GRAY COMPANY, INC.
[illegible] Minneapolis 13, Minnesota
Branch Offices: New York, San Francisco, Philadelphia, Detroit, Chicago

GRACO FAST-FLO PUMP

▼ SERVICE—Identify by IEN-3728 if you write the maker ▼

Have you a similar use for this 1-piece fastener?

It's a Blind Rivet

It's a Refrigerator Shelf Support

It's a Cabinet Door Strike

What's Your Application?

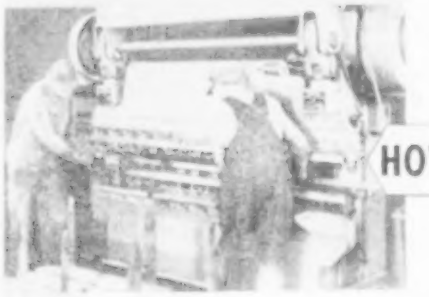
SIMMONS FASTENERS

SPRING-LOCK • QUICK-LOCK • LOCK-NUT

Simmons Fastener Corp., 158 N. Broadway, Albany 1, N. Y.

▼ SERVICE—Identify by IEN-3729 if you write the maker ▼

Punch press output ...up 30%



HOW?

Output jumped 30% on this machine when, on advice of the Norgren representative, The Sunlight Products Corp. of Denver installed a NORGREN LUBRICATOR and a single distribution system that oiled every punch and stripper automatically with **every stroke**. Increased punch life 50%.

Previously, punches were oiled by hand by brush every 10 punches.

★ For finest oiling operations wherever air is used in YOUR plant—get automatic lubrication with no fog, no waste oil. Write E. A. Norgren Co., 222 Seventh St. Drive, Denver 9, Colo.

NORGREN LUBRICATORS

are "way out front:

- Automatic—no attention except refilling
- Growing Annual Sales, repeat every month past installed to-date
- Never oil feed the instant air flow starts
- Accurate, visible—easy control all at flow
- Compact, easy to install, easy all sizes

Norgren

Also Filters, Regulators, Valves, Hose Assemblies

▼ SERVICE—Identify by IEN-3731 if you write the maker ▼

CLEANING . . Steam spray machine delivers hot solvent, has electric heat

Source: HOMESTEAD VALVE MFG. CO. P. O. Box 85, Coraopolis, Pa.

Electric elements [illegible]

The machine [illegible]

The assembly [illegible]

▼ SERVICE—Identify by IEN-3732 if you write the maker ▼

DRYING . . Infra-red oven for motors, generators, batch operation

Source: FOSTORIA PRESSED STEEL CORP. 1219 Fisher Road, Fostoria, Ohio

Coil baking [illegible]

All Makers of Items and All Other Products Are Listed in THOMAS' REGISTER Buyers' Guide — See Page 58

▼ SERVICE—Identify by IEN-3733 if you write the maker ▼

New diacro POWERSHEAR

OFFERS

CONTINUOUS ACTION

plus

VARIABLE SPEED

From 30 to 200 strokes per minute

for high speed

DIE-LESS DUPLICATING

[illegible]

1. CONTINUOUS SHEARING ACTION 2. VARIABLE SPEED 3. EASE OF OPERATION 4. SINGLE STROKE SHEARING

[illegible]

Send for 40 page "DIE-LESS DUPLICATING" catalog giving [illegible]

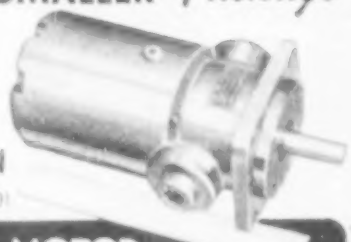
Pronounced "DIE-ACK-RO"

diacro O'NEIL-IRWIN MFG. CO.

[illegible] Avenue, LAKE CITY, MINN.

▼ SERVICE—Identify by IEN-3734 if you write the maker ▼

TORQUE MORE ~~HORSEPOWER~~ in a SMALLER Package



NEW DENISON (Series 400)

FLUID MOTOR

A new high in *compact fluid power*. You get up to 24 hp output from this husky, heavy-duty motor — yet it's less than a foot long. Its rugged, close-coupled, axial-piston action takes sudden stops, starts and reversals with trouble-free ease. Unusual compactness makes it easy to adapt to equipment that puts space at a premium. Operates at 2500 psi, with speeds up to 3000 rpm and a torque rating of over 500 inch-pounds. Flange or foot mountings. This new "400 Series" HydrOLic Fluid Motor meets a wide range of industrial needs . . . Send for bulletin FM-2 for the full story. Write today!

The DENISON Eng. Co. [illegible]

DENISON HydrOLic

▼ SERVICE—Identify by IEN-3735 if you write the maker ▼

To Combat Severe Abrasion . . .

Use the *NEW* HAYNES 92 Rod

Haynes 92 rod is a moderately low melting point hard facing material specially developed to withstand the most severe abrasion. Deposits made with this rod have a hardness of Rockwell C 65.

This rod is particularly suitable for hard facing parts where pre-heating is not practical, also, for applications where a low temperature deposition is necessary to prevent distortion of the base metal such as on fan blades and similar thin sectioned parts. Application of this rod has increased the life of pugmill paddles 10 to 1, and mode wear plates on sheet blast machines last 12 times longer.

You can obtain this new hard facing material as bare rods direct from Haynes Stellite Division, UCC, and also from distributors and jobbers of The Linde Air Products Company.

HAYNES STELLITE DIVISION

Union Carbide and Carbon Corporation

UCC

General Office and Works, Kokomo, Ind.

▼ SERVICE—Identify by IEN-3738 if you write the maker ▼

Since 1908 our BAKER TRUCKS have given us TOP PERFORMANCE at all times, with LOW COST and EASY MAINTENANCE"

[illegible]

Our Baker Trucks keep materials on the move in this plant. Constant plant [illegible] are [illegible] years old and we are getting the same results from [illegible] operation and dependable service of these pay-based [illegible] trucks.

Believe, we installed our electric trucks with the [illegible] we replaced [illegible] hand trucks. [illegible] the trucks enabled us to transfer those to production work. One Baker truck is now doing the work of 12 men with hand trucks. It would be difficult to imagine how we could run our plant without such sturdy, [illegible] material handling equipment. It delivered on these trucks.

Let us show you how economically BAKER Trucks can cut your handling costs.

BAKER INDUSTRIAL TRUCK DIVISION

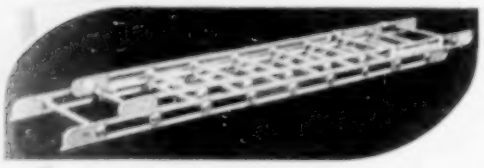
of The Baker Raulang Company

1226 West 80th Street • Cleveland 2, Ohio

Baker INDUSTRIAL TRUCKS

▼ DATA SHEET—Identify by IEN-3737 if you write the maker ▼

REMARKABLY EASY TO HANDLE!



The ALCO-LITE Type LDL ALUMINUM LADDERS

The ALCO-LITE Type LDL ladder was designed specifically for use where extreme light weight combined with considerable strength is required. The 8ft ladder is supplied with locks, pulleys and ropes as standard equipment. Easy to move, easy to erect, easy to store. Fine for general purpose use.

Write for Industrial Catalog describing complete type of ALCO-LITE Aluminum Ladders.

Pioneer Builders of Aluminum Industrial Ladders

ALCO-LITE ALUMINUM LADDERS

ALUMINUM LADDER COMPANY

100 CARBIS STREET • WORTHINGTON, PENNA.

▼ DATA SHEET—Identify by IEN-3738 if you write the maker ▼

HANSEN 2 WAY SHUT-OFF COUPLINGS

Without leakage or loss of fluid the Hansen Series 3000 Coupling is connected or disconnected by a short movement of sleeve. Holds full line pressure—both when connected, and on both sides of line when disconnected. Also used extensively on vacuum applications. Pipe thread and hose connections. Size range ⅜" to 3".

Also straight through and one-way shut-off couplings. Write for catalog.

THE HANSEN MANUFACTURING COMPANY

4021 WEST 150th STREET • CLEVELAND 11, OHIO

▼ DATA SHEET—Identify by IEN-3739 if you write the maker ▼

first again!

APPLETON

Vented Explosion-Proof

Lighting Fixtures that Breathe...

Hot, explosive gases formed when ordinary explosion-proof fixtures operate in explosive atmosphere, can damage the fixture itself. This sometimes causes explosions. Appleton Explosion Proof Lighting Fixtures are vented, allowing gases to escape safely. Vented fixtures are standard equipment on all Appleton explosion proof fixtures. Write for catalog.

Sold through Electrical Wholesalers

APPLETON ELECTRIC COMPANY

1110 Wellington Avenue • Chicago 13, Illinois

Branch Offices and Representatives in All Principal Markets

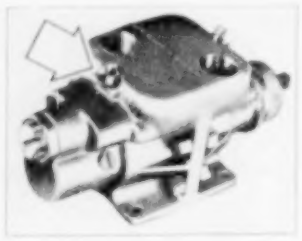
APPLETON

LIGHTING FIXTURES • LIGHTING EQUIPMENT • OUTLET AND SWITCH BOXES
EXPLOSION PROOF FITTINGS • RECEPTACLES

▼ DATA SHEET—Identify by IEN-3740 if you write the maker ▼

PUMP . . Rotary design employs hydraulically balanced bypass

Source: ECO ENGINEERING CO.
10-14 New York Ave., Newark 1, N. J.



Pressure can be adjusted from 20 to 150 lb. on the discharge side of this new design in the company's line of rotary pumps. Volume can be maintained between 1 and 175 gpm at the variable pressure by the action of a hydraulically-balanced bypass built into the assembly. Required volume and pressure are maintained for any setting by a floating spool which bypasses more or less fluid by the action of a series of small mutually-opposing orifices.

The head pressure at which the pump is required to operate to deliver a uniform quantity through a given orifice is set by the bypass adjustment. All excess fluid is then spilled over to the low side. The pump itself is the same oscillating element design as the unit previously described [illegible]. It is made in ¾ and ⅞ in. port sizes with free delivery capacity to 8 and to 10 gpm at maximum speed of [illegible] rpm.

▼ DATA SHEET—Identify by IEN-3741 if you write the maker ▼

HANDLING . . Tote boxes to specification in rubber base plastic

Source: DURABLE FORMED PRODUCTS INC.
329 Canal St., 5th Fl., New York 13, N. Y.

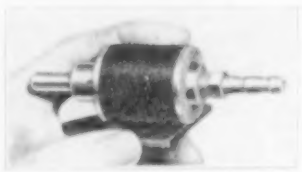
Colors also as specified

Royalite [illegible] rubber-base thermoplastic sheet material, manufactured by [illegible], which the company is now exposed to fabricate into tote boxes in specified sizes. Chief virtues of the material are its combination of strength with light weight and its resistance to attack by oil, alkali, water, its electrical resistance and its mechanical ability to resist chipping and abrasion.

▼ DATA SHEET—Identify by IEN-3742 if you write the maker ▼

CYLINDER . . Miniature pneumatic, ⅝ in. stroke, 75 lb. on 100 lb. line

Source: AIR-MITE
2649-53 W. Lake St., Chicago 12, Ill.



Micro Miniature is a new spring-return single-acting pneumatic cylinder for use in small jigs and fixtures to hold and release work pieces, to index and eject work from hopper and chute. The cylinder is machined from brass bar stock and is mounted on a Bakelite base. The air connection and [illegible] are supplied as illustrated. [illegible]

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 10

▼ DATA SHEET—Identify by IEN-3743 if you write the maker ▼

Restore Battered and Rusted Threads

Nicks and rust eliminated—even heavily corroded threads quickly cleaned, so that nuts turn off and on freely! Think of the time and money saved! No more drilling or hack-sawing to remove damaged bolts and studs. Just slip on your Buckingham Thread Cleaner, tighten the jaws, then turn!

Buckingham Thread Cleaners follow the pitch of any thread within their diameter range. No need to insert or change dies. Cutting jaws adjust easily to proper size on the thread. Jaws should be placed below the damaged area and then turned off through that section. See your nearest Buckingham dealer or write us for catalog or bulletin.

Model	Thread Range	Price
[illegible]	[illegible]	$ [illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]

BUCKINGHAM MANUFACTURING CO., INC.
49-51 Travis Street Binghamton, N. Y.

▼ DATA SHEET—Identify by IEN-3744 if you write the maker ▼

AMES FEATHER-LIGHT POCKET-SIZE THICKNESS MEASURES

[illegible] **B. C. AMES CO.** [illegible]
Mfgr. of Micrometer Dial Gauges • Micrometer Dial Indicators

AMES COMPACT BENCH-MODEL DIAL COMPARATOR No. 2

[illegible] compact design of the [illegible] Dial Comparator makes it ideal for inspection work where production. Ideal for checking close tolerance to ASTM specifications when equipped with dial indicator and proper contact points. Has construction attractive [illegible] for the table [illegible] allowable to bring pointer to [illegible]. Fingertip lever raises contact for rapid checking of pieces. Ideal for inspection fixtures on close ranges.

▼ DATA SHEET—Identify by IEN-3745 if you write the maker ▼

▼ DATA SHEET—Identify by IEN-3746 if you write the maker ▼

NEW! Low Cost *Micro-Mesh* DONALDSON AIR CLEANER!

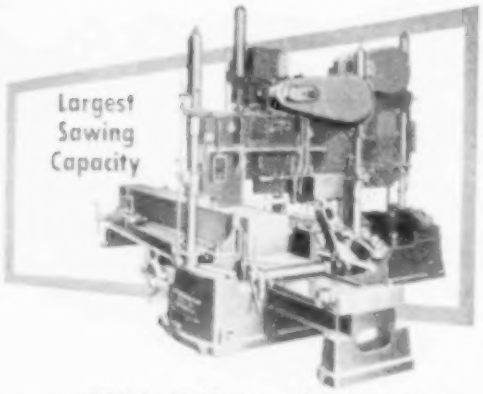
No Tools Required for Servicing

[illegible] Simple Cleaner Saves Oil Expense

Sample Cleaner Sent On Request

DONALDSON COMPANY INC.
600 PELHAM BLVD. • ST. PAUL 4, MINNESOTA

IEN-3747



MARVEL No. 16—16" x 16" MARVEL No. 24—24" x 24"

Designed and developed to bring true accuracy and economy to sawing big work up to 24" x 24". In hundreds of metal working plants from coast to coast, these giant saws have proven themselves to be the best cut-off equipment for the biggest and toughest steels. There are nine other types of MARVEL saws to meet every sawing need. Write for our catalog and give us an outline of your work. We will recommend the right MARVEL saw for your work.

MARVEL SAWS

ARMSTRONG-BLUM MFG. CO.

"The Hack Saw People"

5700 Bloomingdale Ave. Chicago 39, U. S. A.

IEN-3748

HOW TAPE HELPS INDUSTRY SAVE TIME, CUT COSTS...

THE PROBLEM

BINDING HEAVY ROLLS OF INSULATED WIRE

THE ANSWER

PERMACEL IS

SPEEDY PRODUCTION SPRAYING

PERMACEL

SEND FOR FREE BOOKLET! SHOWS HOW TAPE CAN HELP IN YOUR BUSINESS Whatever your business, chances are you'll find the facts, figures and pictures in this 32-page booklet will help you cut costs!

Just fill out the coupon and mail it today to the address below for your copy.

INDUSTRIAL TAPE CORP. NEW BRUNSWICK, N. J.

NAME (PLEASE PRINT)

TITLE

COMPANY

ADDRESS

CITY STATE

Permacel

INDUSTRIAL TAPES

INDUSTRIAL TAPE CORPORATION • NEW BRUNSWICK, N. J.

IEN-3750

VALVE . . Neoprene faced plug controls flow through tank car drain

Source: INDUSTRIAL PRODUCTS CO.
2801 N. Fourth St. Philadelphia 33, Pa.

Whopper Stopper

IEN-3751

PIPE . . Semi-rigid extruded plastic ½ to 2 in. id. sizes. 20 ft. lengths

Source: CARTER PRODUCTS CORP.
10229-33 Meech Ave. Cleveland 5, Ohio

For liquids, vapors, fumes, gases and as electric conduit

Plastic sheets

The plastic

IEN-3752

WOOD WORKING . . Circular saw blade, dampener inserts, carbide tipped teeth

Source: W. F. MEYERS CO.
1019 14th St. Bedford, Ind.

Ultra Fine

IEN-3753

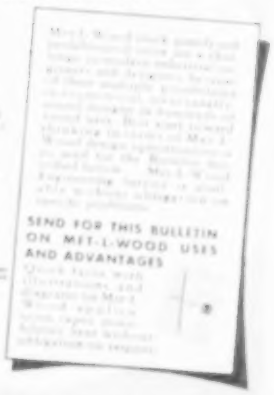
MET-L-WOOD METAL BONDED TO PLYWOOD

Has Hundreds of Structural Uses in Modern Plants

To Name a Few:

- Material Handling
- Doors
- Cabinets and Counters
- Trailer Panels
- Truck Bodies (Industrial, Business, Commercial)
- Truck Body Panels
- X-Ray Rooms
- Molasses Vegetable Food Bins and Containers
- Decorative Fixtures

Met-L-Wood is metal bonded to plywood in permanently. Many metals, woods, thicknesses, shapes, finishes are available to meet YOUR requirements.



SEND FOR THIS BULLETIN ON MET-L-WOOD USES AND ADVANTAGES

MET-L-WOOD CORPORATION

6755 West 65th Street • Chicago 38, Illinois

"Met-L-Wood . . . showing new horizons in structural designs"

IEN-3754

DO YOU KNOW?

—that a PILOT LIGHT CAN IMPROVE YOUR PRODUCT

. . . add attraction—safety—service?

Ask DIALCO

THIS MAY BE THE ONE

SAMPLES for design purpose NO CHARGE

NEW!

Foremost Manufacturer of Pilot Lights

The DIAL LIGHT COMPANY of AMERICA

900 BROADWAY, NEW YORK 3, N. Y.

IEN-3755

Ford reports . . .

A $75,000 per year saving with Kodagraph Autopositive Paper

Before

Now

Learn the whole story

Write today for free booklet

EASTMAN KODAK COMPANY

Industrial Photographic Division, Rochester 4, N. Y.

Kodagraph Autopositive Paper

The Big New Plus in Engineering Drawing Reproduction

Kodak TRADE-MARK

▼ BARRITT—Identify by IEN-3757 if you write the maker ▼

Put this **HELP** *to work on your* **TOOL** *and* **DIE STEEL PROBLEMS**

- Greater Wear Resistance
- Greater Toughness
- Greater Hardening Accuracy and Safety
- Red-Hardness

The Carpenter Steel Co., 151 W. Bern St., Reading, Pa.

▼ BARRITT—Identify by IEN-3758 if you write the maker ▼

ROLLAWAY SEMI-LIVE SKIDS AND JACKS

THE LANHAM COMPANY

▼ BARRITT—Identify by IEN-3759 if you write the maker ▼

SEND FOR YOURS TODAY!

HARPER COMPUTER of corrosion resistance

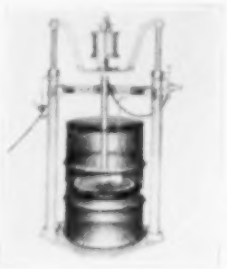
FREE

THE H. M. HARPER CO.

▼ BARRITT—Identify by IEN-3760 if you write the maker ▼

PUMP . . Pneumatic equipment pumps non-flowing material from a drum

Source: STEWART-WARNER CORP.
1828 Diversey Parkway, Chicago 14, Ill.



Pneumatic base and a [illegible] pump have been developed by the company to use with its pneumatically-equipped [illegible] pump to handle materials such as grease, heavy oils, cooking and mixing oils, [illegible] adhesives, wood flour and corrosion-proofing [illegible]. The base and pump can be applied [illegible] pump now in service to [illegible] assembly with the pump and with available [illegible] equipment including [illegible] gauge.

The base includes a [illegible] which [illegible] the pump. [illegible] to a [illegible] the pump shaft and carries a [illegible] with an [illegible] equipped [illegible] and [illegible].

Application of air pressure to the cylinders will force the [illegible] pump shaft on the [illegible] to exert pressure to force [illegible] material out from the drum. [illegible] the pump [illegible] the [illegible] and [illegible]. The application of pressure to the [illegible] will [illegible] material from the drum. The [illegible] and wipes the drum walls clean. The base [illegible] to fit [illegible] Hardware [illegible] 200-liter [illegible] drum [illegible] 5-gallon [illegible] drum [illegible].

▼ BARRITT—Identify by IEN-3761 if you write the maker ▼

RHEOSTAT . . Rotary assembly with long or stub shaft rates .5 watt

Source: INTERNATIONAL RESISTANCE CO.
407 N. Broad St., Philadelphia 8, Pa.

Type PQ with a ¼-in. shaft is in length and Type RQ with a stub shaft slotted for a screwdriver are two new units in the company's line of control rheostats. Power rating is 0.5 watt at 500-volt maximum. Each design is made in 32 standard values, certain of which are available from stock. The shaft passes through a ⅜-in. threaded bushing that serves as a means for mounting. The main body containing the wound resistance and contact fingers measures 1¼ in. in diameter.

Additional load assemblies known as Multisections can be added to the original control to make dual, triple and quadruple units. These Multisections are available in 17 resistance values between 1,000 ohms and 10 megohms.

Bulletin DC4, 4 pages, illustrates and details the design and available stock, electrical values and available combinations with Multisections units for dual and triple action. Data are included on a rotary switch also for multiple assembly. List prices for either type of unit is $1.25.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . Descriptions . . Ratings . . See Page 56

▼ BARRITT—Identify by IEN-3762 if you write the maker ▼

CABLE CO[illegible] HOLDERS GROU[illegible] CLEANING TOOLS SAND[illegible] HELMETS and LENSES HELMETS a[illegible] GOGGLES and EYE SHIELDS CABLE CO[illegible] GROUND CLAMPS PROTECTIVE CLOTHING CABLE

ACCESSORIES

FOR *BETTER* WELDING

Here, in one complete line, is the cream of the crop in welding accessories . . . holders, helmets, connectors, cleaning tools, cable and protective clothing . . . selected to provide topmost performance and to give you safety, speed and lower cost in your welding operations.

Write for latest literature—or contact your Murex representative.

METAL & THERMIT CORP.
120 BROADWAY NEW YORK 5, N. Y.

NEWARK PHILADELPHIA PITTSBURGH CLEVELAND
E. CHICAGO, IND. MINNEAPOLIS SO. SAN FRANCISCO

▼ BARRITT—Identify by IEN-3763 if you write the maker ▼

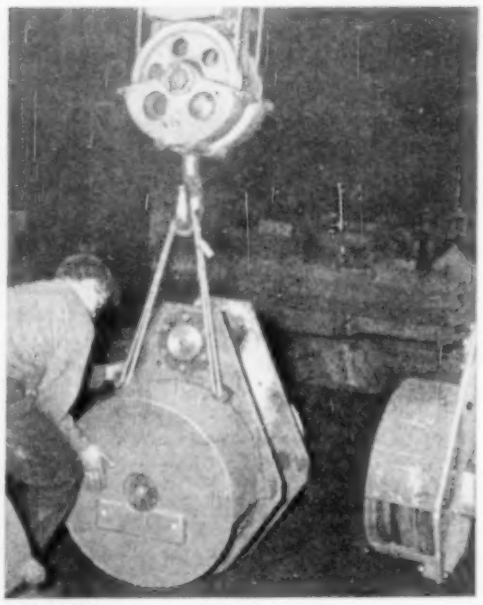
BURT KNOW-HOW ASSURES PROPER ENGINEERING FOR EFFICIENT VENTILATION

For half a century, Burt has been recognized as a leader in ventilating equipment. Over this period Burt engineers have gained invaluable training in ventilating design and applications that only actual experience can supply. This specialized knowledge is available to help solve your ventilating problems on request. It is good insurance of complete satisfaction later.

THE BURT MFG. CO.
ROOF VENTILATORS • OIL FILTERS
EXHAUST HEADS
909 So. High St., Akron 11, Ohio

SEND FOR CATALOGS
Burt Engineers are glad to help on plans

▼ BARRITT—Identify by IEN-3764 if you write the maker ▼



NOW... *Wire Rope Slings*
with flexibility comparable to fiber rope

ACCO REGISTERED WIRE ROPE SLINGS rate high with Safety Engineers. However, operating men are often reluctant to adopt new equipment when it means a departure from long-established ways of handling standard jobs.

Maybe you don't have to depart from established custom to enjoy the advantages of ACCO Wire Rope Slings.

The picture above illustrates a case in point. The hitch is a typical fiber rope hitch. But the sling is not fiber rope. It is a Double ACCO-LOC Cable Load Grommet. It has all the safety, dependability and uniformity of an all-steel, machine laid sling with flexibility comparable to fiber rope. The patented splice develops the full strength of the sling body—plus giving an armored section to use at point of greatest wear.

Like all ACCO Registered Wire Rope Slings, these grommets are rated as to capacity—proof-tested to twice the rated capacity.

Here's a possible way to reduce material handling costs, a certain way to have new safety, reliability and ease of accurate sling inspection. Write today for information about Double ACCO-LOC Cable Load Grommets.

ACCO
AMERICAN CHAIN & CABLE
WIRE ROPE SLING DEPARTMENT
Registered WIRE ROPE SLINGS

▼ REPRINT—Identify by IEN-3766 if you write the maker ▼

▼ REPRINT—Identify by IEN-3767 if you write the maker ▼

▼ REPRINT—Identify by IEN-3768 if you write the maker ▼

3 COST CUTTERS

Inexpensive GRIPCO LOCK NUT—with "double triangle" thread lock. Quick application, locks and holds tight. Can be re-applied many times with little loss of holding power.

Inexpensive GRIPCO "PILOT" WELD NUT—Raised collar centers the nut instantly, accurately, for quick welding. No measuring, no jigs, no time just applying.

Inexpensive GRIPCO WELD NUT—counterbored. Hot metal particles dislodged by welding are shunted away from threads. Bolt threads in to nut without trouble or retapping.

Get samples of sizes you use
compare first cost
compare application cost

GRIP NUT COMPANY
3013-35 MICHIGAN AVE. CHICAGO 16, ILL.

NEWS NOTES

▼ REPRINT—Identify by IEN-3770 if you write the maker ▼

BATTERIES ... Pocket instruction booklet
on storage-battery operation and maintenance

Gould-Storage Batteries Inc.
[illegible] Calhoun St., Toronto 1, Ont.

Revised second edition of convenient five page booklet, "Understanding and Caring for Gould Storage Batteries for Maintenance." Gives a clear concise outline on care of the and new batteries in the hands of plant, fleet, service station, construction or farm. Gives first aid, emergency measures, parts, inspection, table of contents.

▼ REPRINT—Identify by IEN-3771 if you write the maker ▼

BEARINGS ... Instruction booklet
on ball and roller bearing installation and care

Post Anchor Bearing Corporation
[illegible] Hall Street Place, Cleveland 1, Ohio

Useful information on bearing care is contained in new 16-page pocket booklet, "Bearings: Maintenance Instructions" of Anti-Friction Bearings, manufactured by Timken. Explains principles and skill in the proper care of Timken bearings. Illustrations show how to remove bearings from a variety of shafts, including laboratory, bench and hydraulic tools.

▼ REPRINT—Identify by IEN-3772 if you write the maker ▼

BRUSHES ... Engineering service
on how brushes can be applied to your operations

Quinn Mfg. Co.
[illegible] Hamilton Ave., Cleveland 14, Ohio

Resumption is announced by the company's "Quinn Brushing Analysis" service, discontinued during the war. This service is available at your request. Specialists from the company will make a study of your cleaning, finishing, polishing operations to determine where, how and why brushes can be applied to advantage. Results will be reported in a confidential written report.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 10

▼ REPRINT—Identify by IEN-3773 if you write the maker ▼

Need an adhesive

that will meet government specifications for overseas shipment?

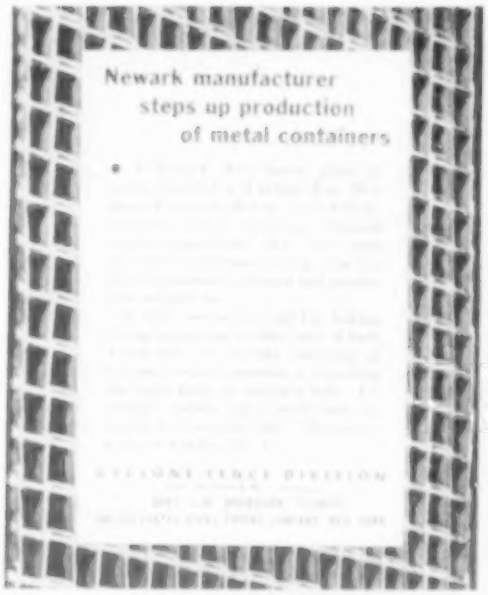
Swift & Company has a [illegible] called Swift Cold Adhesive. It is a non-hygroscopic rubber base compound that dries to a substantial resilient film and tough film. It has been used with complete success for many difficult surfaces ... such as leather, rubber, fabrics, paper, cellophane, glass, metal, wood, etc.

Regular Grade B is available in several hundred specifications. Swift Adhesives for almost every [illegible] Call the Swift Man.

Starch Pastes	Liquid Glues
Dextrin Adhesives	Flexible Glues
Rubber Dispersions	Hide Emulsions

Swift & Company
Adhesive Products Department
CHICAGO 9, ILLINOIS

▼ REPRINT—Identify by IEN-3774 if you write the maker ▼



▼ REPRINT—Identify by IEN-3775 if you write the maker ▼

The Men with the Holes in their Heads!

Big holes! Little holes! Deep holes! How can we bore into holes for you? This may be your problem occasionally. Boring holes at lower cost is the full time problem for Madison engineers. Our specialists can save you money, just as it is doing every day for leading manufacturers. Why not take advantage of the two big things — Madison experience and Madison tools — that can cut cost on your production boring jobs. You'd welcome to put another hole in one of our engineers' heads. Ask them to consider your problem and come up with a cost lowering idea. No obligation, of course. *Write for the information filled Madison Catalog.*

BETTER BORING TOOLS . . . MORE BORING EXPERIENCE

MADISON MANUFACTURING COMPANY
Dept. EN — Muskegon, Michigan

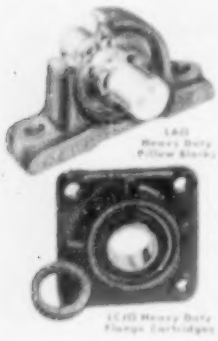
▼ REPRINT—Identify by IEN-3776 if you write the maker ▼

HANSEN TACKER-

A.L. HANSEN MFG. CO.
5051 RAVENSWOOD AVE.
CHICAGO 40, ILL.

▼ Identify by IEN-3777 ▼

How to use ball bearings without costly machining or extra parts



FAFNIR

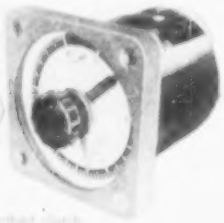
BALL BEARINGS

MOST COMPLETE LINE IN AMERICA

▼ Identify by IEN-3778 ▼

New! Small, Dependable INDUSTRIAL TIMER

BARBER Cycl-Flex



- ELAPSED TIME INDICATOR
- SEALED WINDOW PROTECTS DIAL AND POINTERS
- ENCLOSED MECHANISM
- FLANGE FOR PANEL MOUNTING

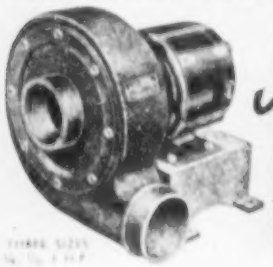
Dials available from 10 seconds to 10 hours

- Timed action initiated by instant clutch
- Accurate timing provided by Synchronous motor
- Knurled controls for easier manual operation
- Also adaptable to regular range

EAGLE SIGNAL CORPORATION Worthy Makers

▼ Identify by IEN-3779 ▼

READY TO RUN—IMMEDIATE DELIVERY!



Sutton MOTOR DRIVEN PRESSURE BLOWERS

THREE SIZES ¼, ½, 1 H.P.

MADE OF LIGHTWEIGHT CAST ALUMINUM ALLOY

CENTRIFUGAL TYPE designed to deliver an even, non-pulsating flow of air for blowing or exhausting, reversal as to rotation and discharge. Direction of discharge may be changed to any of eight 45 degree positions. • Housing, base, support and impeller are constructed of cast aluminum alloy to reduce weight and increase strength. Straight wall construction reduces windage and increases efficiency. • Powered by standard 3450 r.p.m. direct-connected Minarik ball bearing motor in choice of open or totally enclosed type. Three sizes: ¼, ½ and 1 H.P. with capacities from 100 to 800 cu. ft. per min. at static pressures from ½ to 8.

WRITE FOR LITERATURE AND PRICES

Sutton Manufacturing Corp. 112 W. WILSON AVENUE NORFOLK, VIRGINIA

NEWS NOTES—Continued

"Industrial exposition on wheels"

▼ Identify by IEN-3780 ▼

CABLE . . . Useful technical data in catalog on portable electric cable and cords

Insured Insulated Wire Works Co.
[illegible] Huron St., Wilson Saint [illegible]

Electrical formulae [illegible]

▼ Identify by IEN-3781 ▼

ELECTRONICS . . . For industrial control described in book by General Electric engineer

McGraw-Hill Book Co.
330 W. 42nd St., New York 18, N. Y.

Revised second edition is announced for this book, "Industrial Electronic Control," written by W. D. Cockrell, of General Electric Company's Industrial Engineering Division. It has 240 pages. Price at $4. It is intended as a guide to the understanding of electronic machine controls for industrial use, covers basic types of electronic tubes, circuit components, [illegible] electronic control [illegible] products.

▼ Identify by IEN-3782 ▼

EQUIPMENT . . . Trainload of apparatus to tour the country for inspection by industry

[illegible]
Dept. [illegible], [illegible]

Watch for the "Miss Power of America Special," a [illegible] train that will make [illegible] stops [illegible] a industrial exhibit. The train will [illegible] 2,000 [illegible] passengers and includes [illegible] from [illegible] companies and individuals. The Westinghouse Electric Corporation [illegible] with [illegible] the train during part of the schedule.

Purpose of the tours is to show manufacturers the latest equipment and trend in the production and using [illegible] power all nearly [illegible] the country in the [illegible] exhibits include [illegible] power, [illegible] equipment, [illegible] and [illegible].

▼ Identify by IEN-3783 ▼

GEARS . . . New contract service based on a special hydraulic grinding machine

[illegible]

New department [illegible]

To Makers of Electric And All Other Products for United Motors See Page 9
To "THOMAS" REGISTER Descriptions

▼ Identify by IEN-3784 ▼

WECO DROP-SIDE SNATCH BLOCKS

RUGGED — TOUGH EASY TO HANDLE

Forged steel hook and sheave . . . induction hardened extra heavy sheave pin . . . ⅜ steel plate sides . . . self-lubricated "Super Oilite" bearing give WECO SNATCH BLOCKS strength for heavy hoisting, and durability for long life.

The patented "Drop Side" makes it easy to string and unstring the block. Instead of the usual "needle threading" procedure just remove the wing nut, raise side, insert line, drop the side, and replace the nut.

Specify WECO SNATCH BLOCKS for greatest service and longest life. Write for bulletin.

WELL EQUIPMENT MFG. CORP.
Subsidiary of Chicago Company
HOUSTON 1, TEXAS
Exclusive Sales Representatives and Distributors Area
CHICAGO COMPANY
New Calif. New York 7
Export Sales: CHICAGO EXPORT COMPANY, New Calif. New York 7

WECO
Manufacturers and Distributors of Lifting, Hoisting, Marine and Industrial Equipment

▼ Identify by IEN-3785 ▼

SAVE WISELY SAVE SAFELY WITH

FULFLO

By Pass. Oil-Relief VALVES

FULFLO CENTRIFUGAL COOLANT PUMPS

[illegible]

SEND FOR 100-PAGE INTERESTING 1951 FULFLO MECHANICAL DATA BOOK

THE FULFLO Specialties Co., Inc. BLANCHESTER, OHIO

▼ Identify by IEN-3786 ▼

Yours for better bearing protection

—this new book about OIL SEALS

This new book with the [illegible] Manville Clipper Seals [illegible] and [illegible] practical information [illegible] and maintenance [illegible]

It gives [illegible] on [illegible] that are used [illegible] conditions with [illegible] Clipper Seals that overcome problems of [illegible] and contamination with [illegible] can be used for [illegible] and [illegible] made designed for [illegible] and for quick reference when [illegible] are needed.

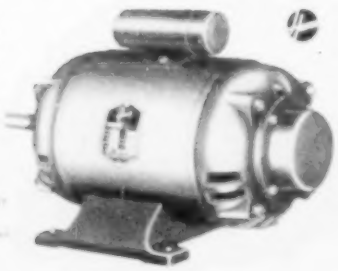
If you have a sealing problem, write to a Johns-Manville Clipper Seal that can help you solve it. Send today for your copy of this new book. Address Johns-Manville, Box 290, New York 16, New York.

JM Johns-Manville CLIPPER SEALS

▼ Identify by IEN-3787 ▼

From Alaska to Australia, wherever your products go, their reputation also depends on the performance of the electric motors you buy to power them. That's why so many manufacturers specify HOOVER Motors, backed by Hoover's World-wide Service Agency System.

Of course, Hoover Motors are famous for reliability. But when they occasionally do trouble—as their manufacturers with ANY motor—there's always a Hoover Service Agency at hand to restore operation in a jiffy, so long-gained YOUR good name. Write for details today.

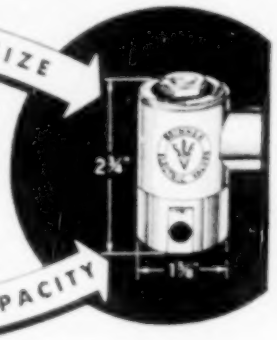


THE HOOVER COMPANY
North Canton, Ohio
Kingston Center, Diamond
Toronto, Ontario

▼ REPRINT—Mail to IEN-3788 ▼

SMALL IN SIZE

Solenoid
STAINLESS STEEL
Valves



LARGE IN CAPACITY

THREE WAY-Two Position-Normally Closed-Normally Open-Directional Flow
TWO WAY-Normally Closed TWO WAY-Normally Open

Skinner Solenoid Valves are extremely compact yet have unusual capacity—a great asset to designers looking for positive, accurate, long-lived controls for liquid and gaseous media. Available in standard pressure range of 5 to 250 p.s.i. and special from 5 to 850 p.s.i. Impregnated coils withstand moisture. Soft insert seats prevent leakage. Spring loaded for positive action. Usable in any position. Power consumption of 10 watts max. Pipe connections available to your specifications.

Write for Bulletin No. 491

Skinner ELECTRIC VALVE DIV.
THE SKINNER CHUCK COMPANY
134 Belden Ave., Norwalk, Conn.

▼ REPRINT—Mail to IEN-3789 ▼

for Finer Finishing . . .
try
ORBITAL MOTION
Sanding

New
LOWER PRICE
$115.

Only the SPEEDMATIC has it! Orbital motion: an abrasive grit moves in same direction as pad and at same speed, thereby ensuring uniform surface.

PORTER—CABLE
Speedmatic
STERLING
1000 SANDER

Or, wood is metal, or vice versa, small series. A for the equalled finisher-edging—the [illegible] on Speedmatic Sterling 1000. Gets a finishing job many times. Plus, it is prepare for original finishing—use it as sized machines for refinishing—use it for handling edges and finishing in plywood. There'll be no scratch, no gouge, no pattern—just glassike smoothness that will amaze you. The Speedmatic Sterling has Porter-Cable quality—balanced lightness for ease of handling—and the latest sanding principle on the market. See one at your dealer's or send coupon today. Porter-Cable Machine Co., Syracuse, N.Y.

Manufacturers of SPEEDMATIC and SUPER Power Tools
In Canada: vector B.C. wire Stringridge Ltd., St. Catharines, Ont.

PORTER-CABLE MACHINE CO.
2684 N. Saline St., Syracuse 8, N. Y.
Please send me further information on the Speedmatic Sterling 1000 Sander and other Speedmatic Sterling Sanders. Also name and address of my nearest dealer.
Name
Address
City Zone State

Speedmatic—the Line of Balanced Design

NEWS NOTES—*Continued*

"Employee manual for office workers"

▼ REPRINT—Mail to IEN-3791 ▼

HANDLING . . . Booklet on expendable pallets describes their use in packing, shipping, storage.

Address: [illegible]
[illegible]

"Tower Pack" [illegible] pallets are [illegible] to use. [illegible] equipment in shipping and storing [illegible] paper, stock. Title is "Expendable Pallets in Our Paper Industry." [illegible] pallet design, or specifications using such a number of specific applications.

▼ REPRINT—Mail to IEN-3792 ▼

HEATING . . . Electronic torch melts tungsten, cuts holes in fire brick

General Electric Co.
Dept. [illegible], Schenectady, N. Y.

High frequency arc [illegible]

▼ REPRINT—Mail to IEN-3793 ▼

INSULATING . . . Technical application data in bulletin on cellular rubber thermal insulation

[illegible]

Design data [illegible] Illinois. It [illegible] Rubber Co. [illegible]

▼ REPRINT—Mail to IEN-3794 ▼

MANAGEMENT . . . Booklet for employees tells how to get along on their office jobs

Technical Publications [illegible]
[illegible] Thomas St., Tonawanda, [illegible]

"Office Workers' Manual" [illegible] 36 page pocket book is [illegible] cents at 50 units per copy and at 4 [illegible] in quantity. It is written by [illegible] Taylor, D. [illegible]. [illegible] assumes the [illegible] thoughts that to be useful to an office worker an employee must be capable of doing the work, be thorough and dependable and be a pleasant person. It covers every aspect on the short [illegible] office [illegible] specifically. [illegible]

We Make or Have And We Offer Products We Listed In THOMAS REGISTER Descriptions Ratings See Page 50

▼ REPRINT—Mail to IEN-3795 ▼

Pays for itself in 5 months

• This shop was using [illegible] electric grinders for grinding [illegible] Rotor Tool [illegible]

Cuts grinding time in half [illegible]

Savings pay for tools in 5 months [illegible]

Improved working conditions [illegible]

Write for free booklet, "How to Choose and Use Portable Tools"

AIR O'TOOL

THE ROTOR TOOL CO.
CLEVELAND, OHIO
UNBIASED ANALYSIS OF PORTABLE TOOL PROBLEMS

▼ REPRINT—Mail to IEN-3796 ▼

EASY, ACCURATE
surface heating
with G-E Calrod® Heaters

Put surface heat where you want it, when you want it, and in the amount you want it with G-E Calrod heaters. Calrod heaters are available for clamping on surfaces, inserting into tubular holes, or wrapping around cylinders and spacing over flat surfaces. And they come in ready-to-install sizes of rings, strips, and sheets to meet almost every conceivable heating requirement.

FOR NEW FREE CATALOG

G-E [illegible] and application bulletin [illegible] "Heating Surfaces," write on your letterhead to Section [illegible], Division [illegible], General Electric Co., Schenectady 5, New York.

GENERAL ELECTRIC

▼ REPRINT—Mail to IEN-3797 ▼

NOW! A wiping tissue 100% grit-free

To make your cleaning operations efficient—economical, Fredo Soft Disposable Kimwipes* industrial wiping tissues. Polish finished surfaces without scratching. Blot up to 15 times their weight in liquids. And as inexpensive, you can use a new frame every time.

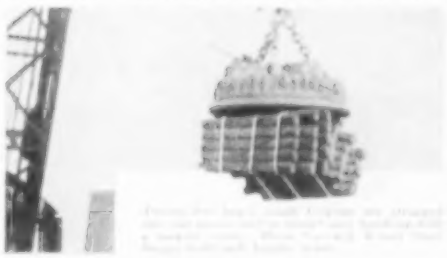
[illegible]

AUTOMATIC CLOSE UP PACKAGE

Write for further information and name of the Kimwipes distributor nearest you.

Kimberly-Clark Corporation,
Neenah, Wisconsin

▼ REPRINT—Mail to IEN-3798 ▼



TIE IT TIGHT...
that means GERRARD!

Tight as tight as can be [illegible]

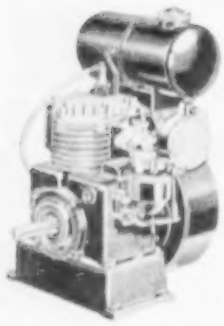
[illegible] Gerrard Steel Strapping Company, 4701 South Richmond St., Chicago 32, Ill.

GERRARD ROUND STEEL STRAPPING

UNITED STATES STEEL

▼ REPRINTS—Identify by IEN-3799 if you write the maker ▼

▼ REPRINTS—Identify by IEN-3800 if you write the maker ▼



Four-Cycle
Air-Cooled

KOHLER ENGINES

- Compact
- Quick-Starting
- Reliable

KOHLER OF KOHLER

▼ REPRINTS—Identify by IEN-3801 if you write the maker ▼

Here's Your Answer To Any Wire Rope or Chain Fitting Problem!

LAUGHLIN

FREE!!! Send the coupon ... no cost or obligation

NEWS NOTES—Continued

"Analysis report on pension plans"

▼ REPRINTS—Identify by IEN-3802 if you write the maker ▼

MANAGEMENT . . . Reminder stickers on "hidden" taxes we all are paying

"Needle Stamps" designed and patented stickers intended to remind everyone of the "hidden" taxes we pay on everyday goods and services. They measure 1⅝ by 1⅞ in. are supplied in a sheet of 20 assorted subjects. List price for 20 sheets is $1. A sample sheet will be sent, without charge, on receipt of a stamped envelope. A larger size, 2⅝ by 2⅞ in., is gummed on the back for an adjustable windshield. It is supplied in a sheet of six at the same list price.

▼ REPRINTS—Identify by IEN-3803 if you write the maker ▼

MANAGEMENT . . . When a machine is "dead" is subject of new book on equipment replacement policy

Machinery & Allied Products Institute
1200 S. LaSalle St., Rm. 846, Chicago 5, Ill.

"MAPI Replacement Manual" is intended as a guide to help determine when a machine is economically "dead" and can be replaced. It is a book of 70 pages, list price $1. It presents a formula for equipment replacement along with practical instructions for its application in a company.

▼ REPRINTS—Identify by IEN-3804 if you write the maker ▼

MANAGEMENT . . . Analysis on pension plans the subject of new Research Bulletin by the Institute

Industrial Relations Institute of America Inc.
250 Madison Ave., New York 17, N. Y.

"Deciding Your Policy on Pensions" fifty-three page booklet by Jim Dalrymple, issued as Bulletin 21 to the above listed members. Individual copies are available while the supply lasts. Topics include the key questions for managements, how much pension, types of pension arrangements, how deciding how much to spend, pay to retire when and why, financing a pension plan, how to estimate the cost.

▼ REPRINTS—Identify by IEN-3805 if you write the maker ▼

PAINTING . . . Booklet on aluminum paint tells where and how to use it to best advantage

Aluminum Corp. of America
2101 Gulf Bldg., Pittsburgh 19, Pa.

"Painting with Aluminum" gives new 32 page information booklet on the features of aluminum paint, properties of three principal types, applications, suggestions for type of surface questions and answers on industrial maintenance painting. At the end is a coverage table.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 56

▼ REPRINTS—Identify by IEN-3806 if you write the maker ▼

tempscribe

STANDARD RANGES

Temperature Range	One Revolution of Chart
—300 to + 100° F	7 Days
—300 to + 150° F	24 Hours
—100° to + 400° F	24 Hours
—100° to + 400° F	7 Days
—50° to + 300° F	24 Hours
—50° to + 300° F	24 Hours
0° to + 200° F	7 Days
0° to + 200° F	24 Hours
0° to + 250° F	24 Hours
0° to + 300° F	24 Hours
0° to + 300° F	7 Days
0° to + 400° F	24 Hours
0° to + 500° F	24 Hours
0° to + 500° F	7 Days
0° to + 600° F	24 Hours
0° to + 700° F	24 Hours
0° to + 800° F	24 Hours
0° to + 1000° F	24 Hours

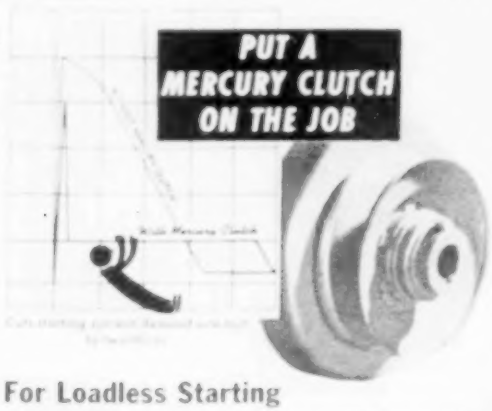
RECORDING THERMOMETER

MOTOR OPERATION RECEIVER ALSO AVAILABLE

Write for Bulletin 101

BACHARACH INDUSTRIAL INSTRUMENT Co. 1100 Beaver St., Pittsburgh 1, Pa.

▼ REPRINTS—Identify by IEN-3807 if you write the maker ▼



For Loadless Starting

An electric motor equipped with a MERCURY CLUTCH reaches full speed before any load is applied, utilizing the full power of the motor to start the load. If you build or operate machines or equipment powered by an electric motor, protect the motor and assure easy starting and smooth pick-up by fitting each motor with a MERCURY CLUTCH. Send for new Mercury Catalog 272-E.

Mercury Clutch Division

AUTOMATIC STEEL PRODUCTS INC. CANTON 6 · OHIO

▼ REPRINTS—Identify by IEN-3808 if you write the maker ▼

Westinghouse stops rust on switchgear housings

SPRAYING HEAVY COAT of EC 1234 on underside of outdoor switchgear cabinets at Westinghouse. Coating protects housings against rust, snow and abrasion from sandblast sand and gravel. Tough EC 1234 is unbreakable, does not chip, is not affected by weather.

OTHER TYPICAL PROTECTIVE COATINGS

EC-244—resists corrosion AND abrasion.

EC-539—Neoprene coating resists strong acids.

EC-968—vinyl coating protects polished metal in cold forming.

Coro-Gard—protects against sour crude oil, fresh and salt water.

WRITE TODAY for complete information on the farmers' money saving systems. Address: Adhesives and Coatings Division, 411 Pequette Avenue, Detroit 1, Michigan. Representative engineers will be called to discuss your problems. Send for Bulletin C and supplemental reports with data sheets. Unusual cases. No obligation.

3M BRAND COATINGS

▼ RAFFITY—Identify by IEN-3810 if you write the maker ▼

Control Costs with

OVER-UNDER SCALES

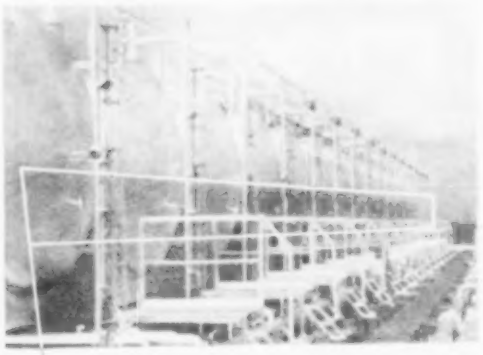
for...Packing
..Checkweighing
..Inspection

Toledo has the scales you need for speedy, accurate Over-Under weighing. Complete line for most needs in packing, checkweighing and inspection. Models assuming to 1 oz or ... capacities to 500 lb. Send for booklet C-10. Toledo Scale Company, Toledo, 1, O.

TOLEDO

HEADQUARTERS FOR SCALES

▼ RAFFITY—Identify by IEN-3811 if you write the maker ▼



Right down the line!

it's

WESTON

All-Metal Thermometers

Wherever you need quick, accurate temperature readings—on tanks, processing equipment, heating, pipe lines—specify WESTONS right down the line. Not only are their large, bold, shatter-proof dials easy to read, but their accurate dependability is assured by WESTON's all-metal construction. They stay on the line longer—cost far less in the end. Available in types, stem lengths and ranges for most applications. Call your jobber or local WESTON representative, or write for Thermometer Bulletin. WESTON Electrical Instrument Corporation, 614 Frelinghuysen Avenue, Newark 5, N. J.

CONTACT-MAKING models for alarm or control purposes. MAX-MIN models to indicate highest or lowest temperature reached.

WESTON *Instruments*

NEWS NOTES—*Continued*

"Analysis service on vehicle tires"

▼ RAFFITY—Identify by IEN-3813 if you write the maker ▼

SILVER . . . Market review booklet
surveys the world situation on silver for 1949

Handy & Harman
850-44 Fifth St., New York 1, N. Y.

If your interest extends to precious metals, by now with a copy of the company's little 24-page booklet, "1949 Annual Review of the Silver Market—1950." It covers production and world trade in silver, approximate coinage, industrial

▼ RAFFITY—Identify by IEN-3814 if you write the maker ▼

PUMPS . . . Cardboard slide calculator
for vacuum pump capacity, time, other problems

F. J. Stokes Machine Co.
5906 Tabor Road, Philadelphia 135, Pa.

"Vacuum Calculator" consisting of two 10 by 13½ inch cards, the pump for evacuating, with three slides and a transparent circle from two yellow and windows on the back. It provides you to determine the needed pump capacity to evacuate a given volume to a specified vacuum in a given time, or the time required to evacuate a given volume to a specified vacuum with existing vacuum pumps. You also can use it to find the vapor pressure of water at various temperatures, the boiling points of solvents under vacuum and the equivalent of vapor under

▼ RAFFITY—Identify by IEN-3815 if you write the maker ▼

TIRES . . . New analysis service
for tires on industrial material-handling equipment

B. F. Goodrich Co.
500-511 S. Main St., Akron 1, Ohio

"TW Analysis Plan" is a new service [illegible] to operators of material-handling equipment to help them [illegible] with saving a great deal of money and time [illegible] operating conditions. Tests, where used, show that they will prevent a repeat of premature tire [illegible] which [illegible] substantial [illegible] of the Goodrich engineering staff [illegible] the plan. The company [illegible] the plan [illegible]

▼ RAFFITY—Identify by IEN-3816 if you write the maker ▼

WELDING . . . Handbook of 1830 pages
covers some thirty welding and cutting methods

American Welding Society
33 W. 39th St., New York 18, N. Y.

New Third Edition of the Society's Welding Handbook has a new format and revised information over the previous 1942 edition. Text is set in two columns per page. Data are given in tables instead of text whenever possible. Cross-reference notes are included at each chapter to related matters in other parts of the book. The book now occupies 830 pages. Number of tables is more than 500. List price is $12.

Major topics are covered in three chapters on welding fundamentals, four chapters on gas welding processes, seven chapters on arc welding, three on resistance welding. There are four chapters on cutting processes, fourteen on ferrous and nonferrous metals, composite welding, and a group of seven chapters on design, material, workmanship and inspection requirements for welding applications.

All Makers of These And All Other Products Are Listed in THOMAS' REGISTER . . . Descriptions . . . Ratings . . . See Page 56

▼ RAFFITY—Identify by IEN-3817 if you write the maker ▼

BASA HAMMERS · FAVORITE WRENCHES · EMPIRE MALLETS · PALMETTO Packings · MORAN'S COUPLINGS · "TUSKO" WALRUS POLISHING LEATHER

EVERY POUND OF PALMETTO® BRAIDED IS BUILT FOR LESS DOWN TIME

It pays to pack well, for the cost of frequent repacking and equipment failure runs out of proportion to the price of dependable packing. Palmetto Braided will show you that economy. Every pound built for 400° F superheated steam service. That means hours per furnishing at all lower temperatures. Structure of high grade, high tensile 12 cut Canadian white asbestos yarn — quality that counts for better wear. Each strand lubricant-impregnated before braiding to insure our outstanding performance. This means less friction, less maintenance, longer life.

Nationwide Distributors get quick warehousing, [illegible] service and the complete line of Palmetto Self Lubricating Packings. Write for Bulletin 14-70.

GREENE, TWEED & CO.
NORTH WALES, PENNSYLVANIA

Contact your fully-stocked Palmetto distributor on all packing problems . . . ask him about our special tools.

▼ RAFFITY—Identify by IEN-3818 if you write the maker ▼

MULTIPLE DRILLING

with a

MULTI-DRILL

INCREASES CAPACITY UP TO 800%

ADJUSTABLE TO ANY HOLE PATTERN
FITS ANY DRILL PRESS

A precision tool for mass production drilling from 1 to 8 holes at a work station. A MULTI-DRILL will cut costs and speed production to 800%. The MULTI-DRILL is automatically adjustable to any hole pattern in a minute's time! It permits fast, [illegible] with conventional equipment. Ideal for jobs of short runs or jobs requiring quick [illegible] to take the work and fast of high production work. The MULTI-DRILL will handle any size and shape for multiple drilling jobs with ease and economy. The MULTI-DRILL will pay for itself in [illegible] months. Write for [illegible] Special adaptations available.

There is a Commander MULTI-DRILL distributor in your area. Write for his name, directions and complete details.

See us at Booth 426, A.S.T.E. Show, Philadelphia

COMMANDER MFG. CO.
4219 WEST KINZIE ST. CHICAGO 24, ILLINOIS

Product of *Commander* – Builder of the *Commander* Tapper

▼ RAFFITY—Identify by IEN-3819 if you write the maker ▼

A precision tool for mating and checking parts between centers. Both heads adjustable, locked in place by steel operated clamps. Work is held between one fixed center while spring loaded retractable center clamps work in position. Dial indicator with adjustable holder available as extra equipment.

FREE ADDITIONAL DATA covering complete specifications and additional features will be sent upon request. Ask for data sheet No. H-92.

SUNDSTRAND MACHINE TOOL CO.
PNEUMATIC MACHINE DIVISION
ROCKFORD, ILLINOIS, U.S.A.

▼ RAFFITY—Identify by IEN-3820 if you write the maker ▼

HYSTER

Salsbury

Turret Trucks

FOR HORIZONTAL MATERIALS HANDLING

✓ Fully Automatic Clutch and Timer
✓ Reverse Ring
✓ Turns in Its Own Length
✓ Economical To Run
✓ Low Initial Cost
✓ Available in Various Sizes

HYSTER COMPANY
Three Factories

▼ BREFITT—Identify by IEN-3821 if you write the maker ▼

MODERN
INDUSTRIAL COUNTERS

Rugged as an Army tank. Work smooth as a watch.

Precision built — for tremendous service life. Tamper-proof Reset.

Modern design—streamlined appearance you can see the quality.

Used by the thousands in Auto and Aircraft Factories, Metal Working, Die Casting, Plastic Molding and Stamping Plants.

See a Silver King and compare. Order sample on approval today.

Send for Catalog
describing
Stroke and Revolution Counters
Coil Winding Counters
Electric Counters
Electric Batch Counters
Actuating Switches

Production Instrument Company
700-10 W. JACKSON BLVD., CHICAGO 6, ILL.
Representatives in Principal Cities

▼ BREFITT—Identify by IEN-3822 if you write the maker ▼

CAUTION
To Ventilator Buyers

If you want to *be sure* of what you're getting when you buy ventilators, insist on *certified* capacity ratings based on tests made with wind blowing in *all* directions, as indicated below.

The First Scientific Improvement in Ventilators in over 50 Years!

Breidert Air-X-Hauster Type B

Only such tests can guarantee the capacities a ventilator will deliver under actual operating conditions! Don't be misled into buying on size alone. Insist on the correct size for the capacity required.

The Breidert Air-X-Hauster has been tested by Smith, Emery & Co. of San Francisco, Pacific Coast branch of the Pittsburgh Testing Laboratory, with wind directed at *all* angles shown above. It is the only ventilator on the market with published certified ratings based on such tests. Breiderts are extensively used on industrial, commercial and residential buildings all over the country, and on most types of pleasure craft and ships.

For detailed information and free Engineering Data Book on the Breidert, send the coupon.

G. C. BREIDERT CO.
3129 San Fernando Road, Los Angeles 65, Calif.

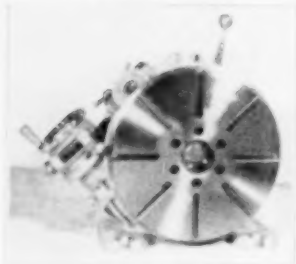
Representatives in Principal Cities of the United States

G. C. BREIDERT CO. (AND 1)
3129 San Fernando Road, Los Angeles 65, Calif.
Send name of nearest Breidert representative
Send Free Engineering Data Book and price literature
Name
Company
Street
City Zone State

▼ BREFITT—Identify by IEN-3824 if you write the maker ▼

INDEXING . . Crank rotated table has optical lens for precise setting

Source: F. T. GRISWOLD MFG. CO.
303-7 W. Lancaster Ave., Wayne, Pa.



New index table has been designed for application on tables of machines such as milling, jig boring, die sinking and at layout and inspection plates to position work and index it in precise movements. The table presents an 11½-in. work surface with a spindle mounted in a preloaded tapered roller bearing for spindle runout within .0002 inch. Mounting is in a base that can position the table surface vertically or horizontally. Overall height in horizontal position is 6 in. and in vertical position is 18½ inches. Maximum diameter through the spindle is 1½ inches. Weight is 170 lb. for the assembly.

The table carries graduations in 1-deg. spacings around its circumference and these flush engraved lines are picked up by a lens system as the lines pass under two parallel lines engraved on the cover to benefit the operator at the side. When a selected division is between the lines the table is on that location within ±0.05 inch. The engraver and cover are positioned for minute and second readings between the degrees by turning the micrometer head to which they are assembled to graduations on its face. Rotation and settings can be locked. An adjustable index pointer applies to approximate settings to facilitate positioning.

▼ BREFITT—Identify by IEN-3825 if you write the maker ▼

ROCK DRILLING . . Gasoline hammer drives, rotates standard drill steels

Source: SYNTRON CO.
410 Lexington Ave., Homer City, Pa.

Two pistons [illegible] weight of crankshaft [illegible] this new hammer. One piston drives the crankshaft with its flywheel and magneto. The other operates the "Tang" rod. The reciprocating power is [illegible] on the at end of the drill steel. Operating speed is at about 2,000 blows per minute. Low and [illegible] operate on gasoline for [illegible] power source.

The new hammer employs a special piston design with a cavity in [illegible] the steel. Exhaust gases are directed through the hollow steel to blow the hole clean of steel. This arrangement operates for hole depths to about 24 inches. Besides that the company recommends a small engine-driven auxiliary blower it is prepared to supply. Operating speed is about 20 cpm using a carbide bit for a 2½-in. hole in sandstone.

The hammer weighs 158 lb., measures 37 in. in length. It takes standard steels with 1-in. 12-pt. shanks. Information is for [illegible] the gasoline or [illegible] supply hose.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER Descriptions Ratings See Page 50

▼ BREFITT—Identify by IEN-3826 if you write the maker ▼

5 MACHINES IN 1!

LULL Traveloader

IT'S NEW BY LULL [illegible]

LULL MANUFACTURING CO.
5612 E. 44th St. • Minneapolis 6, Minn.

▼ BREFITT—Identify by IEN-3827 if you write the maker ▼

Need a Special Pallet?

NATIONAL has a model for every purpose

Here's the new "National Utility"

Low in cost and light weight, although built for rugged use, the new "National Utility" has won universal approval as a general purpose pallet. The patented four-way entry is an especially attractive feature, and the fibre board cover (not shown in illustration) is replaceable.

Write us for prices and delivery on the "National Utility" and literature covering our complete line of pallets and skids.

NATIONAL PALLET CORP.
MAIN OFFICES: OLIVER BUILDING PITTSBURGH 22, PA.

▼ BREFITT—Identify by IEN-3828 if you write the maker ▼

REDUCE PRODUCTION COSTS — F.O.S. Tape is handy, versatile, inexpensive. Simplifies production in many ways . . . Stays put—but can be removed quickly without requiring "cleanup." Let SEAMLESS analysts show you how to save time and money with F.O.S. No obligation! *Write today for samples and prices.*

Finest Quality Since 1877

INDUSTRIAL TAPE DIVISION
THE SEAMLESS RUBBER COMPANY
NEW HAVEN 3, CONN., U.S.A.

▼ BREFITT—Identify by IEN-3829 if you write the maker ▼

New
POCKET SIZE
VOLT-OHM-MIL-AMMETER
MODEL
666R
$24.50
U. S. Dealer Net

With Self-contained Resistance Ranges to 3 Megohms

NOTE THESE SPECIAL FEATURES

Resistance Ranges—[illegible] Megohms, self-contained.

Enclosed Selector Switch—[illegible] Knob self-set.

Unit Construction—Resistors, shunts, rectifiers, batteries, are assembled in molded base integral with [illegible]. Defect can be replaced without calling N. [illegible].

Resistors—Precision [illegible] wire-wound types [illegible] temperature.

Batteries easily replaced—[illegible] and easily, permanently sealed.

Streamlined Styling—Distinctively [illegible] pocket size, [illegible] in attractive black [illegible] finish.

Note [illegible] Panel Mounting [illegible]

RANGES:

TRIPLETT ELECTRICAL INSTRUMENT COMPANY
Bluffton, Ohio, U. S. A.
In Canada: Triplett Instruments of Canada
Georgetown, Ontario

TRIPLETT

▼ REFFITT—Identify by IEN-3830 if you write the maker ▼

A tremendous hit among paper converters and paper goods manufacturers, the new *Rollster* now bids to become the most popular small roll slitter-rewinder ever built by Cameron. Pneumatic pneumatic slitter units, which eliminate the need for slow, separate cutter adjustments; the labor-saving motor driven roling roll lift; and the solenoid operated automatic stop for measuring the length of strip are only a few of the outstanding features of this great new *Camachine*. You are invited to request complete information.

CAMERON MACHINE COMPANY
61 POPLAR STREET · BROOKLYN 2, N. Y.

Copy for Rollster (100)

▼ REFFITT—Identify by IEN-3831 if you write the maker ▼

Discover how wonderfully small trifling expenses mount up to large sums.

—Ben Franklin's Almanac, 1750

A single per cent saved here and another per cent saved there strengthens thy working capital for the coming year.

—Acme Steel's Handbook, '50

Look, Mr. Management, how long has it been since you walked through your shipping room and checked up on your packaging operations?

How long since you sharpened your eye and your pencil to save hours in shipping and materials handling?

Helping you save money, time, materials, labor is where Acme Steel comes in. Nine out of ten companies start coming some when they reach for the telephone and call in one of our sales engineers and get the benefit of what we have learned to do with Acme flat steel strapping, Acme shipping machines and wire, and other Acme Steel products.

Shown below is just one specific example of savings for our customers. If you want more evidence, we have hundreds of actual case studies to show you. In fact, more than 15,000 Acme customers are getting the benefits of Acme Methods now. Call the Acme Steel service office nearest you. There are 16 of these offices in the principal cities of the U. S. and Canada; or send the coupon below.

ACME STEEL

ATTACH THIS COUPON TO YOUR BUSINESS LETTERHEAD

Packaging, Shipping, Materials Handling

Shipping, Carload and L.C.L.

Bag and Box Assembly

Product Assembly

▼ REFFITT—Identify by IEN-3833 if you write the maker ▼

TRUCK . . Two-wheel hand unit with hand lift platform rates 500 lb.

Source: LEICH INDUSTRIES
301-5 E. Ten Mile Road, Royal Oak, Mich.

Lift Master is a new combination of two-wheel hand truck to carry loads to 500 lb. and a hand-operated platform that is raise and lower the load between 2 and 38 in. above the floor. The latter movement is by a hand crank, gears and chain. Overall height in carrying position is 50 inches.

List price is $125 in construction including a pressed steel frame, 10-in. rubber tired roller bearing load wheels and 12-in. 20-ply tread pneumatic swivel on ball-bearing swivel wheels. The 525 mechanism includes a worm and gear powered 2,000-lb. lift jack. Its 10-in. frame is of tubing chain.

▼ REFFITT—Identify by IEN-3834 if you write the maker ▼

CLEANING . . Hand cream removes soil, grease, ink, paints

Source: CARLTON CHEMICAL CO.
31-35 Commerce St., New York 14, N. Y.

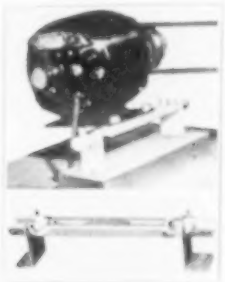
Eight pound tin lists at $9.60

Rapidex is a new cream cleaner made in aqueous base. Does not require water. Does not dry out. Does not leave residue. Does not stain. The cream is applied and left to stand momentarily. The soil is then wiped off with a cloth or paper towel. The cleaner is free from aromatic odors. It is formulated to be non-toxic, non-irritating to the skin. Its pH is 7.0. Sold in 8 oz. and 16 oz. tins or in quantity in 5 gal. cans.

▼ REFFITT—Identify by IEN-3835 if you write the maker ▼

MOTOR BASE . . Hinges small motor removable in brackets, rates to 1 hp.

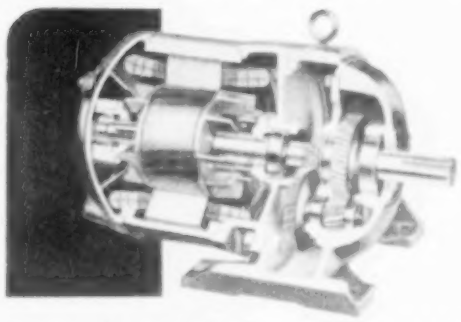
Source: VERMONT WOODWORKER CO.
220-24 Main St., Bennington, Vt.



Two mounting holes in a motor base are bolted to this one hinge base so the motor is overhung when the base rail is pinned in its support brackets. The arrangement engages the motor weight to automatic tension in a V-belt. The parts are made of pressed steel, connected by stamped steel.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER · Descriptions · Ratings · See Page 56

▼ REFFITT—Identify by IEN-3836 if you write the maker ▼



FOOTE BROS.–LOUIS ALLIS

Gearmotors

offer new components in design—improved efficiency in operation—longer life. Available in single, double and triple reductions.

Compact in design with sturdy cast housings. Precision helical gears have hardened tooth surfaces and tough, resilient cores giving long-wear life and maximum load carrying capacity.

Foote Bros. Gear and Machine Corporation
Dept. IEN, 4545 S. Western Blvd.
Chicago 9, Illinois

WRITE FOR BULLETIN G M A ON FOOTE BROS. LOUIS ALLIS GEARMOTORS

FOOTE BROS.

Quality Power Transmission Through Quality Gears

▼ REFFITT—Identify by IEN-3837 if you write the maker ▼

YOU CAN BE SURE . . IF IT'S Westinghouse

The MOTOR SENTINEL is a rugged, compact manual motor starter, which also provides positive, bimetallic overload protection for single phase motors to 1 hp., 115 or 230 v. Components redesigned, greatly improved. Safe, convenient, accessible, attractive. Many extra value features. Enclosures: The can, dust-resistant, watertight, dust-tight, explosion-proof. Also for any standard 27g. duty wall box for both applications. Examine at your nearby Westinghouse distributor, or write Westinghouse Electric Corporation, P.O. Box 868, Pittsburgh 30, Pennsylvania.

Westinghouse
MANUAL MOTOR STARTERS

▼ REFFITT—Identify by IEN-3838 if you write the maker ▼

Here's Another Motor that Won't Burn Out...

KLIXON PROTECTORS Prevent Motor Burnouts, Reduce Repairs and Replacements

Burnout . . . was the motor damaged beyond the usual number, you say, unless adequate overload protection by building in a Klixon Protector.

Out of sight and out of mind, the Klixon Protector keeps constant watch over the motor. It senses when the motor is overloaded, the amount Klixon Automatically interrupts the current. When it senses to be safe operating temperature it restores the power, on again automatically.

Motor manufacturers and equipment makers extend the life line of their products by including Klixon Protectors . . . equipment users expect that specially engineered . . . manual reset types that require the "red button" to be pushed to restore the circuit.

SPENCER THERMOSTAT
Division of Metals & Controls Corp.
204 FOREST ST., ATTLEBORO, MASS.

KLIXON

▼ REFFITT—Identify by IEN-3839 if you write the maker ▼

FOR ANY JOB IN SCREW DRIVING

There's an ARO TOOL to help you

Increase Production. Reduce Costs!

You know the tedious, tough assembly screw driving or nut setting . . . ARO has the tool to do it faster and better cost. Broad range of models and capacities from No. 0 up to No. 12 screws . . . 250 r.p.m., 1000 r.p.m., 2400 r.p.m. . . . specially designed for high production . . . improved workmanship . . . lower unit costs . . . less work spoilage . . . fewer broken bits . . . longer tool life. See your nearest industrial distributor . . . or write for bulletin. The Aro Equipment Corporation, Bryan, Ohio.

ARO
AIR TOOLS
AIR · LUBRICATING EQUIPMENT
HYDRAULIC EQUIPMENT · AIR
END PRODUCTS · GRADE EQUIPMENT

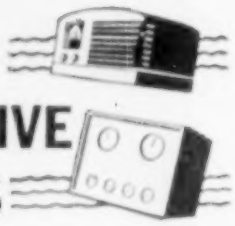
Aro of Canada Ltd., Toronto

RAFFITT—Identify by IEN - 3840 if you write the maker

ELIMINATE WIRES

through use of

DU PONT CONDUCTIVE COATINGS



Easily and rapidly applied by spray, brush, dip, stencil to metals and non-conductors, they give a conductive surface of low resistance. One tiny ounce covers about 2 sq. ft. Use them in printed circuits for radios, amplifiers, switchboards, meters; for capacitors and couplings; for static shielding to replace foils and cans; for resistors and solder seals. Save hours of time, $$$ of cost! For more information, send for Bulletin CP-2-1247. E. I. du Pont de Nemours & Co. (Inc.), Electrochemicals Dept., Wilmington 98, Delaware.

DU PONT ELECTROCHEMICALS

DU PONT

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

RAFFITT—Identify by IEN - 3841 if you write the maker

"TWICE AS FAST AS GUMMED TAPE on 232 boxes, one reports a furniture manufacturer. He now uses Bostitch 1-2C Staplers to set up large, odd shaped cartons for over stuffed furniture . . . and Bostitch Auto-feed Staplers to tip-seal them on the inside entirely from the outside.

"EIGHT TELESCOPE BOXES PER MINUTE stapled with Bostitch HO bottom sticker vs. only three boxes taped per minute, reports a produce packer. Needed more speed and lower cost, too.

"TWICE AS FAST AS HAND-SEWING for boiler boiling compounds," reports a large oil and aniline company. The Bostitch #7 Self-feeding "Hog Ring" gives a fine expedition. Also tells gain in boiler boiling operations.

Your Shipping Room Costs May Be Much Too High

if you're not using Bostitch fastening equipment

Thousands of shipping room costs have been cut, many times slashed by 50 of the more than 100 proved Bostitch stapling machines: wire stitchers, self feeding Staplers, Tackers and more. One or more of them may be just what you need to speed bottlenecks, keep down pilferage, and more generally speed up shipping room. Mail the coupon below . . . today.

ATTACH THIS COUPON TO YOUR LETTERHEAD

BOSTITCH 158 Mechanic Street, Westerly, Rhode Island

Please send me:

Bulletin Fig. 125 on Bostitch Self Feeding Stapler

Bulletin Fig. 218 about Bostitch Automatic Wire Stitching

Bulletin Fig. 218 on Bostitch Wire Stitcher Tackers

Bulletin on Bostitch Shipping Plans

Name _____ Title _____

Firm _____

Address _____

City _____ Zone _____ State _____

BOSTITCH

fastens it better, and faster, with wire

ALL TYPES OF MACHINES FOR APPLYING STAPLES

ALL TYPES OF STAPLES APPLIED BY MACHINES

Trade Mark "Bostitch" Registered U.S. Patent Office

BOSTITCH Engineered Fastening

RAFFITT—Identify by IEN - 3843 if you write the maker

INDEXING . . Precision fixture to set up work to grind, mill, drill

Source: STAR GAUGE CO.
259-63 Oak Grove Ave., Springfield 9, Mass.

An index head with a locating ring for 12 positive positions around a circle and with a vernier for odd spacing is mounted on a slide plate for horizontal or angle setting at right angles with its spindle. Range for angle setting is to 45 degrees. The head spindle carries a collet chuck which has a work capacity to ½ in. in diameter.

The fixture measures 7½ by 4½ by 4¼ inches. Slide-plate length is 2.500. Accuracy is within .0001 inch. Total runout at the nose is within .0002 inch. The unit is made of steel hardened and ground within .0002 in. on all surfaces. It weighs 12 lb., is suited particularly for tool room application.

RAFFITT—Identify by IEN - 3844 if you write the maker

PAINTING . . Synthetic enamel for gloss finish on Masonite, metal

Source: MONROE SANDER CORP
10-20 46th Ave., Long Island City 1, N. Y.

Color is to specification

High gloss, resistance to marking, staining, impact cracking characterize new line of synthetic enamels for flowing application on metal products, panels and parts made of Masonite. Application is by dipping, roller coating, spraying for air or bake drying to meet given product and production requirements. Package quantities are 5 and 55-gallon.

RAFFITT—Identify by IEN - 3845 if you write the maker

CUTTING . . Circular abrasive blade mounts diamond impregnated rim

Source: FELKER MFG. CO.
1130 Border Ave., Torrance, Calif.

Granite, marble, limestone, masonry are typical materials that can be cut with this recently improved Di-Met circular abrasive blade. Two new designs in the line mount diamond impregnated rims measuring ⅛ and ¼ in. in depth as compared with the previous ⅛ inch.

Ten sizes from 6 to 24 in. in diameter have ⅛ in. rim depth; width through 18 in., .145 in. from 18 to 24 inches. Blades with the ¼ in. rim and .175 in. width are made in 16 to 24 in. diameters in 2 in. increments.

They are available in .125 in. in the 22 in. size and .175 in. in the 22 in. size and .175 in. diameters in 2 in. increments.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 50

RAFFITT—Identify by IEN - 3846 if you write the maker

Now you can fasten V-belts by using

ALLIGATOR

V-BELT FASTENERS

● Alligator V-Belt Fasteners and the improved V-belting now being used by leading manufacturers will enable you to make up multiple V-belt drives from roll belting. These fasteners have been on the market 6 years and are now being used on a wide variety of drives.

Available for B, C, D sizes of belt for industrial use and C, D, and E sizes for heavier use. These fasteners, however, should not be used for connecting endless roll V-belts.

Bulletin V-200 will give you complete details as to where and how these fasteners are used, sizes, list prices, tools and application instructions. A copy will be mailed to you upon request.

Dealer Terms and Jobber Prices

FLEXIBLE STEEL LACING COMPANY
4670 Lexington Street, Chicago 44, Illinois

Also sole manufacturers of Alligator Steel Belt Lacing for flat transmission belts and Alligator Mill Belt Fasteners and Rip Plates for fastening and repairing conveyor belts.

RAFFITT—Identify by IEN - 3847 if you write the maker

Need top quality Welding Supplies . . .

Quickly?

Call U. S. Steel Supply Co.

■ Each of our warehouses have stand by stock to enable us to give you fast delivery service on Stainless Steel Electrodes, Mild Steel Electrodes, Hard-Surfacing Electrodes and All the other items in our large stocks of welding supplies.

Whenever you need Welding Rod, Welding Machines, Oxygen, Protected CO₂, Clamps or Protect-O-Mask for arc welding with spatter guards, write us with our nearest warehouse. You'll get Service Plus.

WHEN YOU DEAL WITH US, YOU GET Service Plus!

UNITED STATES STEEL SUPPLY COMPANY

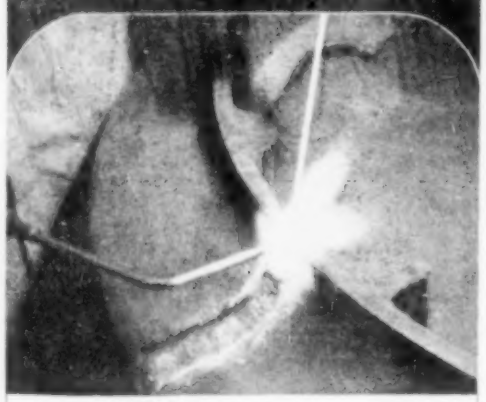
Warehouses Coast-to-Coast

Headquarters: 208 S. La Salle St. Chicago 4, Ill.

UNITED STATES STEEL

RAFFITT—Identify by IEN - 3848 if you write the maker

SAVE as much as 15% in welding time and gas . . .



REDIFLUXED BRONZE welding rod

Does away with hand-fluxing when brazing iron and steel or welding bronze and brass

YOU can't beat this high-quality flux-coated, low-fuming manganese-bronze rod for best results—and savings in labor and gas used. No stopping to apply flux by hand. Jobs are done faster.

The coating provides automatic accurate control of flux. This means correct bonding—gives dense, ductile deposits with high tensile strength, ideal for machining and threading. Ideal for wearing surfaces, too, because of the toughness and resistance of the deposited metal.

REDIFLUXED BRONZE is free-flowing, with a low melting point of 1625° F. and a flow point of 1680° F. Less heat is required—means gas saved.

Recommended for brazing steel, cast iron and malleable iron, for welding brass and bronze. Sold in rods up to 1/16 and 1/8 in. diameter, 36 long, packed in tubes containing 10 lbs. . . . Switch to REDIFLUXED BRONZE today. Packed by NCG.

Write for Illustrated Folder

NATIONAL CYLINDER GAS COMPANY

244 North Michigan Avenue, Chicago 11, Illinois

NCG

EVERYTHING FOR WELDING

▼ REPRINT—Identify by IEN-3850 if you write the maker ▼

PULLMAX

Sheet and Plate Working Machines

Imagine, one machine doing all of these operations—seven models that work the heavier gauges up to 11/32" (on mild steel). Also ideal for working stainless, nonferrous metal, wire mesh. Leaves a smooth perpendicular cut with no further finishing required. Pullmax does it better. [illegible]

WRITE FOR ILLUSTRATED CATALOG

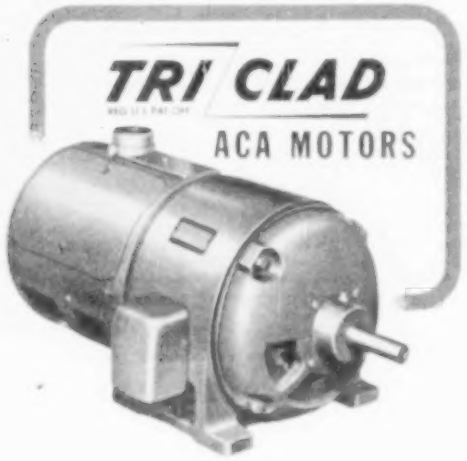
AMERICAN PULLMAX CO., INC.

2631 North Western Avenue Chicago 47, Illinois

▼ REPRINT—Identify by IEN-3851 if you write the maker ▼

YOUR BEST BET

to get simple, inexpensive speed control from *a-c power*



Have you a machine where varying speeds are desirable or performance improved by speed on a single line voltage adjustable speed drive?

A General Electric TRI-CLAD ACA motor might be the answer. Look at these points in its favor:

- **IT RUNS ON A-C POWER!** No commutator, no brush problems to be expected. Make the most current of automatic control, simple or complex, with the ACA. [illegible]
- **YOU DIAL THE SPEED!** A simple wind of the dial on top of the motor gives you [illegible] speed control within the limits specified. [illegible]
- **IT'S A REAL "PACKAGE" DRIVE!** The motor [illegible] complete with the speed control, [illegible] Mounting with [illegible] the same [illegible]

WANT MORE INFORMATION?

Here's what to do. Check your local GE office in for a copy of Bulletin GEA-[illegible], which describes the ACA motor in detail. Or if you want to know more about adjustable speed drives in general, ask for Bulletin GEA-[illegible], SECOND EDITION. It's like the date of a specially trained engineer of a specific adjustable-speed application. Address Apparatus Dept., General Electric Company, Schenectady 5, N. Y.

Quick Facts

ABOUT GENERAL ELECTRIC ACA MOTORS

SPEED RANGE: [illegible]

HORSEPOWER: [illegible]

VOLTAGE: [illegible] 440, 550 volts, 60 cycle, 3 phase power.

STARTING: [illegible] voltage. Smooth, dry acceleration when creeping speeds are required.

SPEED REGULATION: [illegible] per cent for the high-speed setting.

The ACA motor is one of a complete line of General Electric adjustable-speed drives.

GENERAL ELECTRIC

GEA-[illegible]

▼ REPRINT—Identify by IEN-3853 if you write the maker ▼

WEIGHING . . Conveyor equipped scale rejects containers that are off-weight

Source: TOLEDO SCALE CO.
Telegraph Road, Toledo 12, Ohio

New scale [illegible] line to a conveyor line handling filled cans, various contents of any uniform type, weighing 18 lb or more. It will handle cans with in any predetermined single weight. It employs adjustable photoelectric controls that act, in the event of over-weight or under-weight for any reason, to eject as shown in the illustration to a side conveyor or to stop the main conveyor until the defective container has been removed manually. Operates to 55 containers per minute.

▼ REPRINT—Identify by IEN-3854 if you write the maker ▼

WOOD WORKING . . Circular saw blade carbide tipped for glue-line ripping

Source: DELUXE SAW & TOOL CO.
2474-78 Blue Island Ave., Chicago 8, Ill.

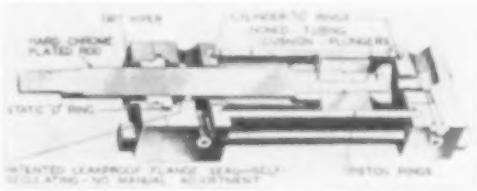
Glue will not dull the carbide teeth

Two new saw blades have been developed by the company for glue-line ripping duty. One measures 14 in. in diameter and carries 60 teeth. Intended application is in 5-8 machine. Operating speed is 3,000 to 3,600 rpm.

▼ REPRINT—Identify by IEN-3855 if you write the maker ▼

CYLINDER . . For hydraulic service to 3,500 lb., 1½ to 12 in. sizes

Source: MILLER MOTOR CO.
4025-35 N. Kedzie Ave., Chicago 18, Ill.



Two new sizes have been added to the company's previously developed line of Bodmaster hydraulic cylinders with bore diameter at 10 and 12 in. bore. Both are available in the same design variations as the smaller units in flange, lug, foot, centerline, rod, and trunnion mountings.

The company has prepared new literature containing 16 pages of illustrated text that includes "The new HC Hydraulic Standards and shows how its cylinder construction compares with those powered by standards.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . Descriptions . . Ratings . . See Page 10

▼ REPRINT—Identify by IEN-3856 if you write the maker ▼

BREEZE CORPORATIONS, INC.
10 SOUTH SIXTH STREET
NEWARK 7, N. J.

▼ REPRINT—Identify by IEN-3857 if you write the maker ▼

Make printing a part of your processing

GOTTSCHO

ROLAPRINTER

. . . imprints continuous roll, sheet, strip

Short, compact, [illegible] the ROLAPRINTER can be attached to [illegible] machines, [illegible] machines, etc. [illegible] Adjustable [illegible] of [illegible] and [illegible] speed up to [illegible] per minute.

Write for Data Sheet [illegible] and prices.

ADOLPH GOTTSCHO, INC.

MACHINES TO MARK WHATEVER YOU MAKE

188 DUANE STREET NEW YORK 13, N. Y.

▼ REPRINT—Identify by IEN-3858 if you write the maker ▼

Improved Method Centrifugal

SPRAY DRYER *and* CONCENTRATOR*

Complete information on improved centrifugal Spray Dryer, illustrated with photographs and engineering design drawings.

THE DRYING AND CONCENTRATING COMPANY DRYER

Improved method for **DEHYDRATING**

[illegible] and the product will be handled in a liquid form including:

Chemicals
Pharmaceuticals
Milk Products
Blood or Blood Plasma
Soaps, Vegetables, etc.

[illegible] Dryer has been [illegible] Dryer has [illegible] and [illegible] the [illegible] and [illegible] the [illegible]

*CONCENTRATOR AVAILABLE SEPARATELY

The Concentrator can be operated as a separate unit for reducing liquids or solids to almost any desired degree of concentration, where [illegible] heating liquid feeds and effluents.

DRYING and CONCENTRATING CO.

221 SOUTH MICHIGAN AVENUE, CHICAGO, ILLINOIS

▼ REPRINT—Identify by IEN-3859 if you write the maker ▼

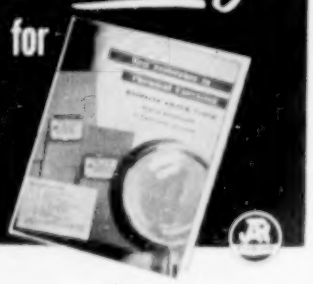
*Reg. U. S. Pat. Off.

▼ REPRINT—Identify by IEN - 3860 if you write the maker ▼

TO STOP CORROSION LOSSES

Today it's Roebling!

Send now for this free bulletin



HERE'S A BULLETIN that may show you how to stop or effectively reduce corrosion losses in screening and filtering operations. It describes Roebling's new wire filter cloth made of Hastelloy — cloth with an entirely new resistance to many acids, despite high temperatures and a wide range of concentrations. It also lists a wide range of corrosive media and indicates where Hastelloy alloys may be adapted for genuinely superior service. Write today.

WOVEN WIRE FABRICS DIVISION
JOHN A. ROEBLING'S SONS COMPANY
ROEBLING, NEW JERSEY
A CENTURY OF CONFIDENCE

▼ REPRINT—Identify by IEN - 3861 if you write the maker ▼

FOR MORE ACCURATE SELECTION OF QUALITY END MILLS...

BROWN & SHARPE OFFERS 8 ADDITIONAL TYPES

SEE THEM
and other production-boosting end mills
IN THE NEW HANDY-SIZE CATALOG

WRITE for a copy of this catalog describing important production-proved features of all Brown & Sharpe End Mills, together with complete specifications and prices. There's a Brown & Sharpe quality end mill to meet every end milling need. Brown & Sharpe Mfg. Co., Providence 1, R. I., U.S.A.

We urge buying through the Distributor

BROWN & SHARPE IBS

▼ REPRINT—Identify by IEN - 3862 if you write the maker ▼

Get this

for file reference on small tubing availabilities!

Superior
THE BIG NAME IN SMALL TUBING

SUPERIOR TUBE COMPANY
2016 Germantown Ave., Norristown, Pa.

▼ REPRINT—Identify by IEN - 3863 if you write the maker ▼

PIPE FITTING . . Expansion joint provides axial, offset, radial action

Source: CHICAGO METAL HOSE CORP.
1313 S. 3rd St., Maywood, Ill.

Flexmaflex crimp unions are jackets that the line to connected appliances for some use and look to available for general use in pipe runs, or crimp jackets to [illegible] The unit consists of [illegible] and bellows-type sections of stainless steel or other specified alloy material, [illegible] crimp rings and end sections assembled as a unit.

Present sizes range from ¾ to 6 in. in inside diameter. Larger sizes can be specified. Maximum line length is 4 in. for the ¾ to size, 18 in. for the [illegible] size. Overall length is greater for the two end sections. Temperature range is from sub-zero to 1,000 deg. F., while stainless steel is the material of construction. The company offers its engineering service to assist in solving installation problems.

▼ REPRINT—Identify by IEN - 3864 if you write the maker ▼

FABRIC . . Parade twill for use in uniform and work shirts

Source: REEVES BROTHERS INC.
52-56 Worth St., New York 13, N. Y.

Sample available upon request

Mercerized, vat dyed, fast to sunlight, is one of the fabrics in which the company has announced a new Parade Twill for use in manufacture of shirts for uniforms and for workers' wear. The material is light weight, has most of the characteristics of the company's Type 5 at a lower price. It is made of combed extra twenty single.

▼ REPRINT—Identify by IEN - 3865 if you write the maker ▼

SWITCH . . Sensitive, snap acting rates 20 amp. on 110-volt ac.

Source: UNIMAX SWITCH DIV.
460 W. 34th St., 15th Fl., New York 1, N. Y.

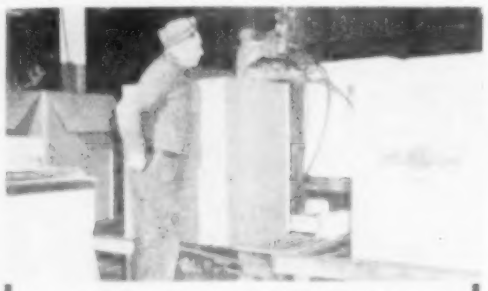
Type SXX is a lock mounting in the company's line of snap-line switches. The new unit is essentially the same as the basic Type MX except that its contacts are rated to carry [illegible] amp. at 110-volt ac service. Overall dimensions are about 2 by 11 by 12 inches. The silver contacts are weight-pressure loaded.

Operating force is 9 to 15 ounces. Release force is [illegible] ounces at 4 ounces. Movement differential is minimum at .005 in. which increased to .025 in. and underrated to .005 inch.

Catalog 19-11, "Precision Switches," 28 pages. Illustrates, describes, specifies the company's lines of switches and accessory parts for equipment control and circuit operation.

All Makers of Items And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page M

▼ REPRINT—Identify by IEN - 3866 if you write the maker ▼



SHIP IN BIG CARTONS?

The bigger the carton the bigger the savings when you ship them with an International Automatic Knee Staple Machine. Picture it you will, how confusing and slow will the closing of these cartons would be by any other method — how slow operation does the job in just a few seconds. 400 cartons per hour.

Added savings are realized by the carton wrapping for cold seals for use — International Staple Machines close both the tops and bottoms simultaneously from the outside! And what is most important is neat and secure closure is effected every time.

EST. 1928

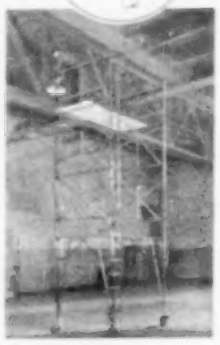
INTERNATIONAL STAPLE AND MACHINE COMPANY
HAVERTOWN 5, PENNA.
Distributors in Principal Cities

▼ REPRINT—Identify by IEN - 3867 if you write the maker ▼

ADVANCE

ROLLING TOWERS

Convenient to Erect
because of the
Patented CAM-LOCK*



All boxes in ADVANCE Rolling Towers are equipped with Cam-Lock which locks into position and securely fastens the panels to a lock of the wall. No bolts, nuts, clamps, keys, angle irons or tools are needed. Because of the patented Cam-Lock, ADVANCE Rolling Towers are the most convenient and faster to erect and dismantle.

Brake type casters permit fast and effortless movement from place to place. Towers as well as stationary jacks of any height can be quickly assembled from the standard interchangeable tubular steel parts. For convenience, speed, ability, and safety — you can't beat ADVANCE Rolling Towers for compact. ADVANCE towers you buy. Write for literature and the name of your local distributor.

* Pat. No. 2,493,90[illegible]

BEAVER ART METAL CORPORATION 1201 Factory Ave., Ellwood City, Pa.

▼ REPRINT—Identify by IEN - 3868 if you write the maker ▼

Which tool do you need to loosen nuts?

Monel nuts on steel bolts and studs can save a lot of trouble when you're taking apart pipe joints or machinery.

How would you like to get some important advantages of a Monel® nut and bolt for less the price of the Monel nut?

You can — by making a practice of putting Monel nuts on steel bolts and studs.

With Monel nuts on the job, you'll always be able to make the nut work a wrench. There'll be no more time and money lost by having to remove bolts, fastenings with a cold chisel, a cutting torch or hacksaw.

Monel resists corrosion by salt water, sulphur and most acids. Monel is completely unpitted.

Monel is 50% stronger. Even some chrome steels can't match the strength and tough toughness of Monel.

Monel is non-sparking. Safer than steel in industrial fastenings.

Monel is non-magnetic. Safer than steel in instruments and electronic equipment.

So take advantage of the savings you get with Monel. Try Monel nuts on steel bolts and studs, dry and flange fastenings, valves, fittings, fastenings, etc. Monel fastenings are available in all sizes and types.

FIND OUT FOR YOURSELF how economical it is to use Monel. Ask your Mill Supply or Hardware or Industrial Distributor for Monel fastenings. Or write to us.

Here are some places you can use Monel Nuts

Pressure parts	Heat exchanger equipment
Steam lines	Tank hot coils
Effluent lines	Paper machinery
Valve flanges	Process plant equipment
Pump stuffing glands	Pipe lines
Engine studs	Pipe lines aboard ship
Machinery studs	Mountings
Electrical connectors	Hangers
Exhaust pipe flanges	Covers and pans

THE INTERNATIONAL NICKEL COMPANY, INC.
67 Wall Street, New York 5, N. Y.

Monel Fastenings are stronger . . . tougher . . . safer

IEN-3872

You are looking at the powerful 381 MallDrill that takes the work out of boring holes in everything from wood to steel.

It will drill large and small holes efficiently from the smallest to ½" (when ½" drill is used with ½" shank) in steel, masonry and concrete, also ¾" in wood. It is quickly and easily converted to a grinder, disc sander, wire brush, hole saw, polisher, screwdriver or paint stirrer by simply interchanging the attachments in the chuck. When mounted in the MallDrill Stand, it serves as a drill press; when fastened in the Mall Pedestal Assembly it serves as a lathe for turning wood, a general grinder, tool and knife sharpener and other tools. Other models available with capacities ranging from ¼" to 1¼".

Ask your Supplier Today for a 381 MallDrill or write Portable Power Tool Division for literature and prices.

32 Factory Owned Service Stations from Coast to Coast give quick, dependable repair service. Over 1000 Mall Portable Gasoline Engine, Electric, and Pneumatic Power Tools for a million jobs. A dealer in every town can supply you.

MALL TOOL COMPANY
7782 SOUTH CHICAGO AVE. CHICAGO 19, ILL.

IEN-3873

STRENGTH!

Feats of strength are always admired

FLASH-STONE

makes the strongest industrial floor resurfacers in the entire field
the strongest
the easiest to install
the lowest cost

No others have *dared* to do as well

Don't pay too much—for too little. Get the facts. Find out about the material with the highest repair order volume.

Materials for fast patching—for complete resurfacing—for almost any type of traffic or production engagement. Send for free descriptive literature. Write to

FLASH-STONE COMPANY, INC.
3723 Pulaski Avenue Philadelphia 40, Pa.

IEN-3874

FAIRBANKS-MORSE
GENERATING SETS

You can have power wherever you need it—and as much as you need—when you take along a Fairbanks-Morse portable generating set.

Fairbanks-Morse generators are available in capacities from 400 to 15,000 watts—A.C., D.C., or A.C.-D.C., according to type.

They are widely used in resorts, cabins, sawmills, farms, radio stations, remote residences and many other industrial and commercial purposes.

For complete information about a generator to meet your needs, see your local Fairbanks-Morse dealer or mail the coupon.

FAIRBANKS-MORSE,
a name worth remembering

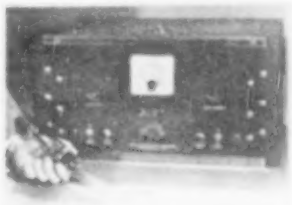
DIESEL LOCOMOTIVES AND ENGINES • ELECTRICAL MACHINERY • PUMPS • SCALES • HOME WATER SERVICE AND HEATING EQUIPMENT • RAIL CARS • FARM MACHINERY

Fairbanks, Morse & Co.
600 S. Michigan Ave., Chicago 5, Ill.
Please send full details about your power generating sets for portable or permanent service.
Name
Address
City State

IEN-3875

GAGE . . Electronic instrument reads vacuum to 2 times 10^{-9} mm. Hg.

Source: DISTILLATION PRODUCTS INDUSTRIES
753-57 Ridge Road, Rochester 13, N. Y.



Type DPA

IEN-3876

WELDING . . Plastic cover plate protects helmet glass from spatter

Source: AMERICAN OPTICAL CO.
12-16 Mechanic St., Southbridge, Mass.

Previously used in aircraft and

IEN-3877

TRUCK . . Drum handling attachment to grip, lift and tier 55 gal. drums

Source: ELWELL-PARKER ELECTRIC CO.
4060 W. Clay Ave., Cleveland 14, Ohio

Three Models

IEN-3879

TIME METERS

A KT Time Meter on this machine showed total utilization to be only 12½%. This suggested a change in machine design which increased utilization to 80%.

KT TIME METERS

EASY TO INSTALL

GENERAL ELECTRIC

IEN-3880

For Fast, Accurate Thickness Gaging

New
Starrett
No. 1015
PORTABLE HAND DIAL GAGE

New STARRETT Portable Dial Hand Gage No. 1015 is designed for rapid, accurate thickness gaging of parts and materials in leading metal shops, textile mills, paper, rubber, metal, ceramics, etc. The gage is easily held in one hand by means of "natural grip" finger rings and is operated by a thumb lever. Contact pressure of the ¼" dia. flat anvil is independent of the operator. Available in two thicknesses (see either No. 1015-A with indicator graduated .0005" reading 0-50, range 0-½" and No. 1015-B with indicator graduated .001" reading 0-100, range 0-1". Both have a throat capacity of 2½ inches. Both are ergonomically furnished with double dial indicator with a full-face which rotates up to 10 revolutions of the large hand. Other indicators are available. Also special sizes and shapes of anvils.

RESERVE YOUR FREE COPY NOW

Get the New Tool Bulletin 29 describing the new Portable Dial Hand Gage and more other new dial indicators and precision measuring tools. Write for your free copy today.

Starrett Standard of Precision
By Through Your Distributor

THE L. S. STARRETT CO. ATHOL, MASSACHUSETTS, U.S.A.

IEN-3878

16 Advanced Features

Consult Valve and specification engineers

JENKINS VALVES

IEN-3881

B

ALLIS-CHALMERS, YORK, PA. TO 17
MILWAUKEE, WIS.

ALLIS-CHALMERS A-C

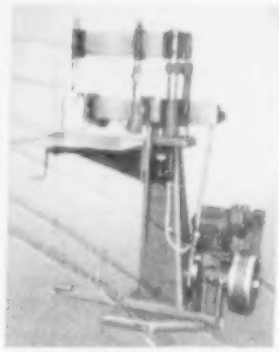
IEN-3882

IEN-3883

VERSATILITY

for DOZENS OF INDUSTRIAL JOBS

THE LOW-COST, HEAVY DUTY SARANAC STAPLER



Here's a low priced, heavy duty machine that will cut costs for you on a wide variety of fastening jobs. Makes joints tighter, stronger than nailing. Stapling needs make and drive their own staples from reels of wire purchased on the open market. Staple sizes available range from 3/16" x 3/8" to 1" x 1½" or 5/8" x 1½". The heads are adjustable horizontally, and can be mounted for driving at 0°, 45°, or 90°. 90° table is adjustable vertically through 20°.

BULLETIN 166 GIVES FULL DETAILS ON THIS PROFIT PRODUCER. ASK FOR IT TODAY.

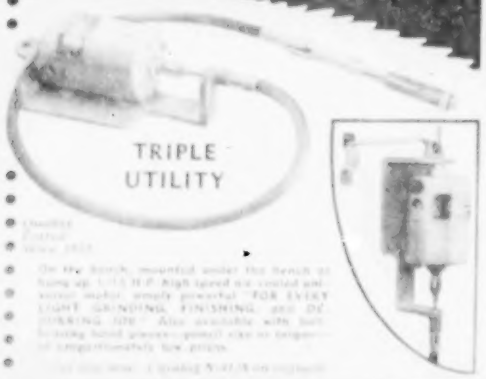
SARANAC MACHINE CO.
BENTON HARBOR MICHIGAN

IEN-3884

NEW MODEL • NEW FEATURES . . . Sensational LOW PRICE!

FOREDOM FLEXIBLE SHAFT MACHINE No. 9050

ONLY $27.95 Complete with FOOT RHEOSTAT and Quick-Detachable PENCIL-SIZE HANDPIECE

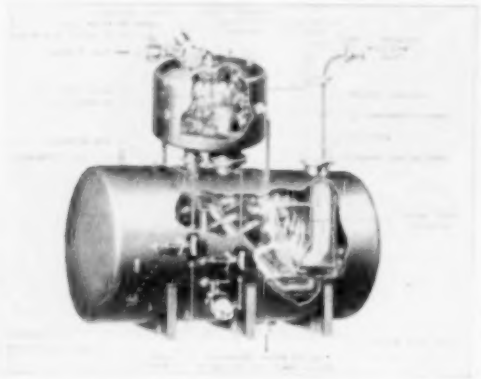


FOREDOM ELECTRIC CO., Dept. N-4128

IEN-3885

HEATING . . Boiler feed equipment also removes oxygen and carbon dioxide

Source: GRAVER WATER CONDITIONING CO.
216 W. 14th St., 1st Fl., New York 11, N. Y.



Protection is provided for a boiler and its accessory equipment against pitting and corrosion due to oxygen in the feed water by application of this unit. Heat-age deaerating feed water heater. The assembly is available in ratings to 2000 sq. ft. per hour. The second stage is made to meet given power conditions and to provide a required storage capacity. Oxygen content is reduced to within .005 cc. per liter as measured by the ASTM Rubricate Method or Modified Winkler Test.

Incoming cold water, preheat water, hot condensate enter in the first stage, heating at the top of the assembly where the cold water and the fuel-controlled makeup feed through spring loaded spray heads. The water is broken up as the steam atmosphere produced by the incoming exhaust from the second stage and the steam is heated to within a [illegible] of the steam, to remove practically all of the oxygen and free carbon dioxide.

The heated water passes into the lower body of the equipment where it is mixed with the steam excess of incoming steam as pressure through a [illegible] diffuser. The steam pressure of the steam [illegible]. The pressure through the water surface with it, to the outlet in the first stage, any free oxygen or uncondensed gases. Free carbon control makeup and condensate of the water entering, and is storage in the main tank. Bulletin W-101, 8 pages, illustrated, details.

IEN-3886

CLEANING . . Liquid mixture for motors, generators, machines

Source: E. I. du PONT de NEMOURS & CO.
2518 du Pont Bldg., Wilmington 98, Del.

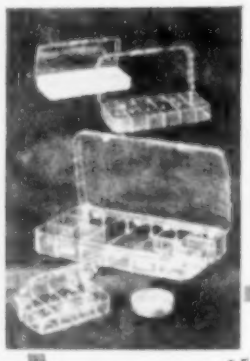
Action is fast
leaves no muss

Cleaning Mixture 49 is a new combination of two liquids, one of which the company supplies, for cold spray application in cleaning electric motors, generators, machines. The liquid dissolves grease, soaps, oils quickly, is practically inert to ordinary insulating materials.

Blend CF 49 is one of the two materials making up the mixture. It is available from the company and is employed in the proportion of 20 per cent to the 80 per cent of Stoddard Solvent which the user purchases elsewhere. Flammability and toxicity are both low.

All Makes of Tools And All Other Products Are Listed in THOMAS REGISTER . . . Descriptions . . . Ratings . . . See Page 30

IEN-3887



Pyra-Shell
TRANSPARENT
UTILITY BOXES

STORAGE • SERVICE KITS
ASSEMBLY • SALES PACKAGING

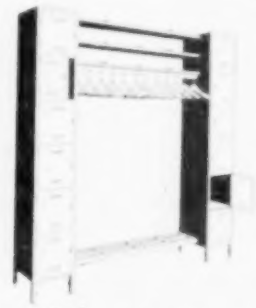
Economically stocks our lightweight, clear hardboxes are available in a complete range of sizes and compartment arrangements. Unlike rigid boxes, the molded boxes that are fabricated from tough, flexible sheet stock. If one of the many standard boxes does not meet your exact needs, low dip cost permits fabrication of one of boxes in small quantities at reasonable prices. Write for Catalog.

SHOE FORM CO. INC.
12 DeWitt St. Auburn, N. Y.
IN CANADA: Fraser Zair Co. Ltd., P.O. Box 2000, Montreal

IEN-3888

VALET RACKS

Lockerette
KEEPS WRAPS
"in press"



VOGEL-PETERSON CO.
624 So. Michigan Ave., Chicago 5, Ill.

IEN-3889

THE MERCOID CORPORATION
4223 West Belmont Avenue, Chicago 41, Illinois

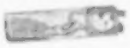
MANUFACTURERS OF AUTOMATIC CONTROLS FOR HEATING, AIR CONDITIONING, REFRIGERATION AND NUMEROUS INDUSTRIAL APPLICATIONS. ALSO MERCOID BRAND MERCURY SWITCHES.

MERCOID
CONTROLS AND MERCURY SWITCHES

See Catalog No. 600 for description of complete line

DA PRESSURE CONTROLS

MERCURY SWITCHES



LIQUID LEVEL CONTROLS

TEMPERATURE CONTROLS

MERCOID FLOAT CONTROLS

MERCOID RELAYS

All Mercoid Controls are equipped exclusively with mercury switches—assuring better control performance and longer control life.

IEN-3890

LEIMAN AIR PUMPS TAKE UP THEIR OWN WEAR

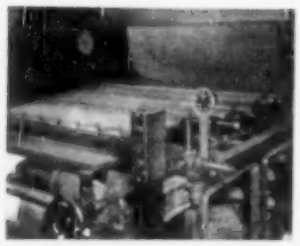
LEIMAN BROS. INC. 145-151 CONGRESS STREET NEWARK 3, NEW JERSEY

▼ DETAILS—Circle IEN-3891 on the order card ▼

JONES TACHOMETERS

For Permanent Installations on Machinery and Equipment

You can rely on Jones Industrial Tachometers for accurate checking of speeds and production, and also for maintaining a predetermined, desirable and satisfactorily high rate of production. They can be furnished with dials indicating in yards per minute, revolutions per hour, feet per hour, gallons per hour or minutes, etc. A wide variety of standard dials available to meet practically any requirement. Jones Portable Hand Tachometers also available. Catalog 146-2 on request.



Type R JONES TACHOMETER

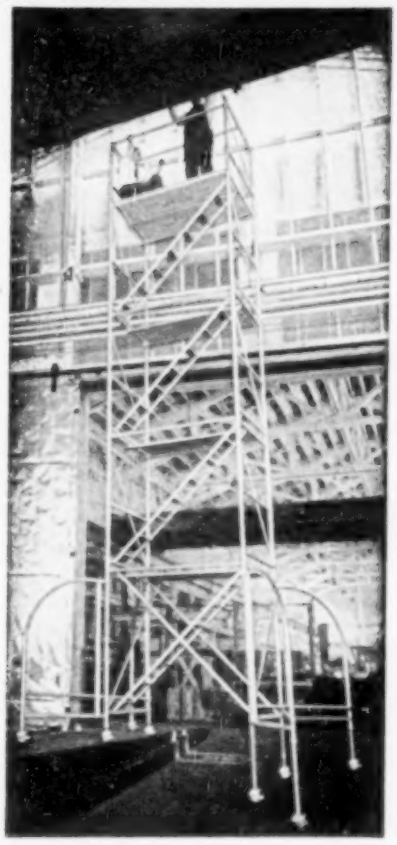
Jones Industrial Tachometer applied to a slasher in a textile mill.

JONES MOTROLA CORP.
456 FAIRFIELD AVENUE STAMFORD, CONN.

▼ DETAILS—Circle IEN-3892 on the order card ▼

Speed up overhead maintenance with Aluminum Alloy "UP-RIGHT" SCAFFOLDS

This mobile 30' unit was set up by 2 men in only 10 minutes



New labor-saving, cost-cutting advancement for work on walls, ceilings, cranes, overhead machinery, sprinkler systems, ventilating and heating installations. Bridges obstacles with ease. Available in desired number of 6 foot section units. Instantly adjustable legs. Stronger than structural steel yet one-third the weight. Safety tread stairway completely within the structure. No wrenches, wing nuts, bolts. Three units. Each section folds flat.

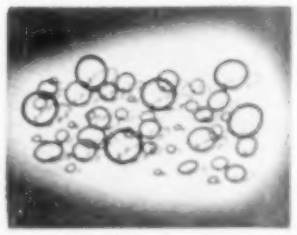
Write for Descriptive Circular

UP-RIGHT SCAFFOLDS
DEPT. 138 • 1013 PARDEE ST.
BERKELEY, CALIFORNIA
Offices in All Principal Cities

▼ DETAILS—Circle IEN-3894 on the order card ▼

SEALING . . Oil resistant O-rings, injection molded synthetic rubber

Source: MINNESOTA RUBBER & GASKET CO.
3628-32 Wooddale Ave., Minneapolis 16, Minn.



New compound of synthetic rubber has been developed by the company for use in the field of O-ring seals. This new compound is molded to precision tolerances. The compound is molded in precision molds, with the product ready for use. Tests show it to be resistant to ozone, heat, and to abrasion in service. The line includes sizes ranging from 3/32 to 15/16 in. cross diameter for 3/32 to 15/16 in. internal diameter. Product is supplied in 5,000 pounds.

Catalog 9-A, 16 pages, gives background information, description, data on physical characteristics, application, installation and includes data on synthetic rubber. Includes table of sizes under pressure in storage assemblies, cross-section tables, typical installation drawings.

▼ DETAILS—Circle IEN-3895 on the order card ▼

DRIVE . . Oil-resistant V-belt stronger than company's standard belt

Source: ALLIS-CHALMERS MFG. CO.
909 S. 70th St., Milwaukee 14, Wis.

Stretch is same as standard belt

Super-7 is a new belt construction for the company's Lockstitch V-belt. The new belt is about 40 per cent stronger and greater in strength than the previously developed standard Lockstitch belt. It is particularly suited for use in drives where space is limited and the pulleys of the smallest size must be used. The belt is available in A, B, C, D and E sections and is the same length as the standard Lockstitch belts.

▼ DETAILS—Circle IEN-3896 on the order card ▼

LUBRICATING . . Coolant equipment, foot operated, for use at a machine

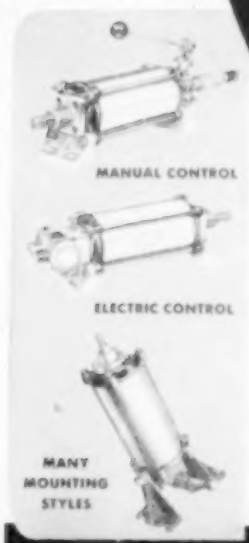
Source: W. A. HOREJSI CO.
2003 James Ave. N., Minneapolis 11, Minn.

Steel tank holds coolant or oil of course supply to the floor beside a machine. It is equipped with a foot-operated pump that delivers the coolant through a 3/8 in. hose. Some coolant is left in the tank when the pump is first used. The tank is filled with coolant through a funnel in the top. Pump works by foot operation in the open position. If the pump is locked in the open position, it does operate by the gun.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 16

▼ DETAILS—Circle IEN-3897 on the order card ▼

NO EXTRA VALVES TO BUY



BELLOWS Air Motors are complete air cylinder power units. Valve, valve operating controls and speed controls are built in. No extra valves to buy. Only one air connection required. Available with either manually-controlled air valve or electrically-controlled air-powered air valve. Five basic sizes, 1½", 1¾", 2½", 3½", 4½". Any stroke length.

• Write for Bulletin BM-50 Dept. IEN-150

The Bellows Co.
AKRON 9, OHIO

▼ DETAILS—Circle IEN-3898 on the order card ▼

AMERICAN-FORT PITT SPRING
Division of H. K. Porter Company, Inc.
2 John St., McKees Rocks, Pennsylvania

▼ DETAILS—Circle IEN-3899 on the order card ▼

GENERAL PLATE DIVISION
of Metals and Controls Corporation
74 Forest Street, Attleboro, Mass.

▼ DETAILS—Circle IEN-3900 on the order card ▼

MORE for Your Money

1. Easy to Read 4" Dial Thermometer shows temperature of process or operation under control.
2. Valve Stem Lubricator at no extra cost.
3. Over-Heat Protection at no extra cost.

Reduce Costs—with this better type of self-acting temperature regulator. It prevents OVER-heating. Controls liquids or air, heating or cooling. Valve Sizes ½ to 2" incl. Available without thermometer in sizes ½ to 6". THE POWERS REGULATOR CO., 2737 Greenleaf Ave., Chicago 14, Ill. Offices in 50 Cities.

WRITE FOR BULLETIN 329

POWERS No. 11
TEMPERATURE INDICATING REGULATOR
Simple • Dependable • Economical

IEN-3901

KIRK and BLUM

NEW TYPE "M"

UNIT DUST COLLECTORS

Maximum Capacity Minimum Space and Maintenance

The new Heavy Duty Unit Collector offers many features not found in the ordinary portable dust collecting unit. Cleaned air may be returned to room or ducted to outside. Motor and collector are completely isolated from dust — the unit is completely fireproof. Housings are extra heavy. This unit can be readily moved to meet changing needs. Models available in 450, 900 and 1800 CFM at high velocity.

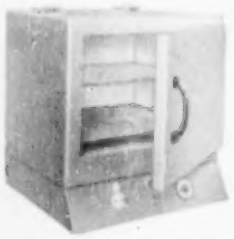
Kirk and Blum with 42 years experience in large dust control installation have designed this unit for higher efficiency with greater capacity and compactness. Write for Bulletin M. The Kirk and Blum Mfg. Co., 2786 Spring Grove Ave., Cincinnati 25, Ohio.

KIRK-BLUM
DUST CONTROL SYSTEMS

IEN-3902

GREATER HEAT UNIFORMITY!

HUPPERT MODEL 5700 OVEN



Scientifically designed Huppert double venting system maintains uniform heat equalization throughout the oven — removes fumes and gases. Latest type thermostatic control maintains ±2°F. accuracy within the range of 75°—500°F. Built-in time regulator heating school size. This oven meets all laboratory requirements for precipitation, ash determination and general chemical use. Built to stand up under continuous usage with galvanized heat treating All steel, with explosion-proof door latches (10" 20" x 15" x 19" O.D. 24" x 24½" x 24" 110-220 Volt Single Phase A.C.

Write for literature covering our complete line of custom installations to meet special requirements.

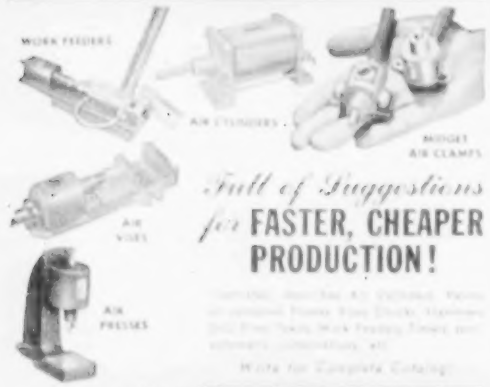
MODELS	WATTAGE	TEMPERATURE RANGE	PRICE
5700-17	[illegible] Watts	[illegible]	[illegible]
5700-M1	[illegible] Watts	[illegible]	[illegible]
5700-H1	[illegible] Watts	[illegible]	[illegible]

K. H. HUPPERT CO.
4656 COTTAGE GROVE AVENUE CHICAGO 37, ILLINOIS

IEN-3903

NEW MEAD INDUSTRIAL

AIR POWER CATALOG Ready!



Full of Suggestions for FASTER, CHEAPER PRODUCTION!

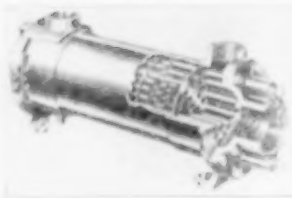
Write for Complete Catalog

MEAD SPECIALTIES COMPANY

IEN-3904

HEATING . . Tubular exchanger standardized design, also for cooling

Source: ROSS HEATER & MFG. CO.
1405-13 West Ave., Buffalo 2, N. Y.



Type SSCF

Dimensions

IEN-3905

DECALCOMANIA . . For plush finish on internal and external surfaces

Source: NORSID MFG. CO.
19-23 Atherton St., Yonkers 1, N. Y.

Sample available upon request

Finish Decal

IEN-3906

FASTENING . . Press tools for users to form nuts in sheet metal

Source: PRESTOLE CORP.
3123-7 Bellevue Road, Toledo 6, Ohio

Prestolites

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER — Industrialists — Buyers — See Page 16

IEN-3907

A New JOHN CRANE Lapmaster Service.....

PRECISION JOB LAPPING

FAST—ACCURATE—INEXPENSIVE

- CAST IRON
- STEEL
- BRONZE
- BRASS
- CERAMICS
- CARBON
- AND MANY OTHER MATERIALS

Write or call for full information.

JOHN CRANE
CRANE PACKING COMPANY
LAPMASTER DIVISION
1859 CUTLER AVENUE • CHICAGO 13, ILLINOIS

IEN-3908

FOR "TAILOR-MADE" TORSION SPRINGS... CALL ON WICKWIRE

We can supply torsion springs in an almost endless variety of sizes, shapes and designs for every industrial use. Our spring specialists will help you design the springs best suited to your particular requirements. Write now for your copy of our helpful booklet, "Springs—and Formed Wires."

WICKWIRE SPENCER SPRINGS
PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL & IRON CORPORATION
Spring Sales Office & Plant [illegible]
Executive Office [illegible]
Sales offices: [illegible] Chicago [illegible] New York • Cleveland [illegible] • Pittsburgh

CF&I

IEN-3909

HOW A POWER CYLINDER OF A WATER WHEEL GOVERNOR is designed for

Long, Trouble-free Service

with BURD "Graf-Flox" PISTON RINGS

200 P.S.I. Pressure Sealed Effectively with 2-Ring Piston

The 10" power cylinder assembly of a Woodward Waterwheel Governor, illustrated above, controls generator speeds by regulating water flow. Working pressure of 200 psi is effectively sealed with two-Burd 10" x ⅜" "Graf-Flox" compression rings. The cylinder is bored and reamed to +.0005" of nominal size. The piston is precision ground .0007" under cylinder size. The rings are precision machined and fitted in piston with .002" side clearance and .116" depth clearance.

Why Burd "Graf-Flox" Piston Rings Offer Profitable Advantages

Fine-grain electric furnace iron assures best lubricating and wearing qualities

Tension 100-lb. insures long life

Precision machining insures accurate fitting

"Graf-Flox" finish provides better bearing surface — assures faster break-in, eliminates scuffing or seizing

No Run-in Required — Surface Treatment Eliminates Seizing

In addition, the rings are "Graf-Flox" surface treated which reduces frictional resistance upon installation as much as 60%. Scuffing and seizing is eliminated. No run-in is required. Natural graphite in the ring metal provides a superior bearing surface. Smooth operating performance and years of trouble-free service are results consistently obtained by Woodward Governor Company.

Free Specifications — Engineering Assistance

Call on Burd engineers for help with your ring design problems. No obligation. Write today for free specification sheets and more facts.

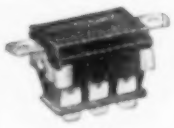
BURD PISTON RING COMPANY
23rd Avenue & White St. Rockford, Illinois

BURD
Automotive and Industrial PRODUCTS

Since 1914

IEN-3911

FOR PUBLIC ADDRESS, RADIO, and kindred fields, specify JONES 400 SERIES PLUGS AND SOCKETS of proven quality!



Double Contact Area

Phosphor bronze knife-switch socket contacts engage both sides of flat plug contacts.

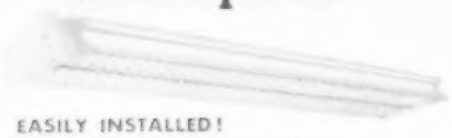
Socket contacts phosphor bronze, cadmium plated. Plug contacts hard brass, cadmium plated. Insulation molded bakelite. Plugs and sockets polarized. Steel cups with baked crackle enamel. 2, 4, 6, 8, 10, 12 contacts. Cap or panel mounting.

Information on complete line, in Jones Catalog 17: Electrical Connecting Devices, Plugs, Sockets, Terminal Strips. Write

Howard B. Jones Division
CHICAGO 24, ILLINOIS
SUBSIDIARY OF UNITED-CARR FASTENER CORP.

IEN-3912

Only this O.C. OCULAR COMFORT fixture checks on all points!



EASILY INSTALLED!
ECONOMICAL AND EFFICIENT!

1. Durable construction
2. One piece bottom louver
3. Lamps shielding 15° brightness, 15° concealed
4. Quickly, easily installed
5. Easily cleaned
6. Low surface brightness

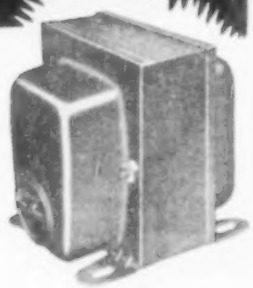
Distributed Exclusively through Electrical Wholesalers

Wheeler Reflector Company, 273 Congress St., Boston 10, Mass.

Wheeler REFLECTOR COMPANY
Lighting Equipment Specialists Since 1881

IEN-3913

STEP DOWN TRANSFORMERS



Whenever you need a 110/115 volt, 60 cycle current supply but have only 200-240 volt, 60 cycle available, use an Acme Electric Step Down Transformer. 75 to 1000 watt capacities have primary cord to plug into line and secondary plug receptacle. 2000 and 3000 watt capacities available with conduit knockouts.

Write for Bulletin 3010

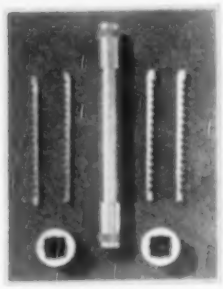
ACME ELECTRIC CORPORATION
264 WATER STREET CUBA, N. Y.

Acme ACME Electric

IEN-3914

BROACHING . . Four-blade cutter, bore diameter from ¾ to 2½ in.

Source: KASE MACHINE CO.
18423 Buffalo Ave., Cleveland 19, Ohio



Four slots [illegible]

NOTE: [illegible]

IEN-3915

SHIM STOCK . . Rolls of sheet brass, .001 and .002 in., in metal cylinders

Source: SPENCER SPECIALTIES
P. O. Box 632-A, Beverly Hills, Calif.

New packaging [illegible]

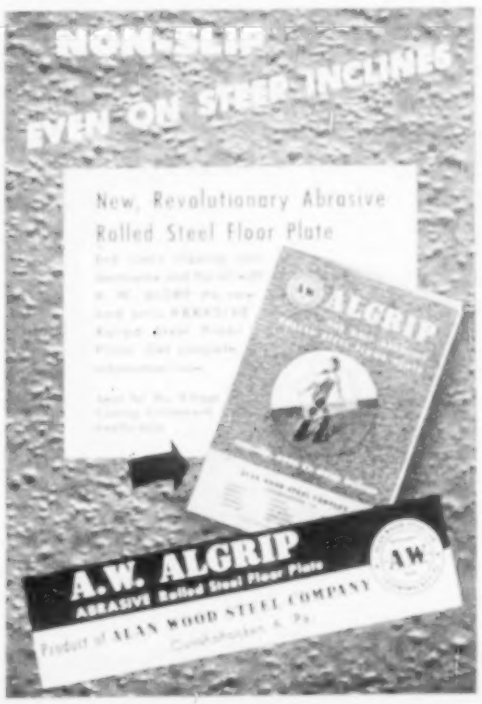
IEN-3916

PULLING . . Fish tape and reel to find and pull in wire and cables

Source: HOLUB INDUSTRIES INC.
49 Holub St., Sycamore, Ill.

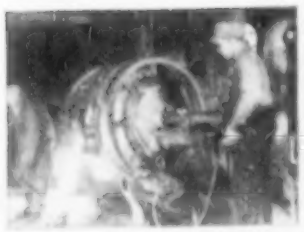
Offset seams [illegible]

IEN-3917



IEN-3918

No pigs in 168,930 lbs. of synthetic alloy iron!



with DETROIT ROCKING ELECTRIC FURNACE

[illegible]

You Can Effect Savings Too!

[illegible]

Write today!

DETROIT ELECTRIC FURNACE DIVISION
KUHLMAN ELECTRIC COMPANY
1030 26th St. • BAY CITY, MICHIGAN

IEN-3919

FREE FOR YOU

this fact-filled booklet on better ways to package your product

A fresh solution manual prepared for you by the makers of Kimpak* carpet wadding. The work of technical experts, skilled engineers. Gives you the most safe methods of ensuring damage to products in shipment. Use it—and watch your profits rise!

SIMPLY MAIL THIS COUPON

Kimpak Corporation
Carpet Wadding Division
Neenah, Wisconsin, U. S. A.

Please send me the new booklet on better ways to package my product.

Name
Firm
Address
City
State

IEN-3920

TIRED EYES MAKE MISTAKES

SAFEGUARD WITH RA-TOX WOOD SPLINT VENTILATING SHADES

Keep eye-fatiguing sun glare out of your plant with low-cost, easy-to-operate RA-TOX Shades . . . and at the same time keep twice as much as 18° cooler on hot summer days. RA-TOX Shades allow correct ventilation without harmful drafts and let in a diffused light with up to 40% more illumination than other types of shades. Available in types and sizes for every need. Write for folder.

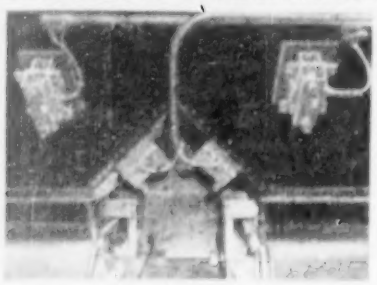
THE HOUGH SHADE CORPORATION
Industrial Division
1032 JACKSON STREET • JANESVILLE, WISCONSIN

BREVITY—Identify by IEN-3921 if you write the maker

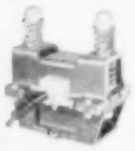
SYNTRON

"Pulating Magnet"

ELECTRIC VIBRATORS



Keep Material Moving



— out of bins, hoppers and chutes

Controlled, pulating vibrations penetrate the mass—activate each particle and break down arching and plugging.

Write for illustrated folder.

SYNTRON CO., 410 Lexington, Homer City, Pa.

BREVITY—Identify by IEN-3922 if you write the maker

High Voltage Transformer for Testing Dielectric Strengths as used in National's Research Laboratories

National's Continuous Research
—the answer to your
Improved Profitable Products

NATIONAL VULCANIZED FIBRE

PHENOLITE Laminated PLASTIC

NATIONAL VULCANIZED FIBRE CO.

BREVITY—Identify by IEN-3923 if you write the maker

GET LONGER BELT LIFE with . . .

— identified by the unique cone and wing design — exclusive with Sprout-Waldron—

Its self-cleaning action is ideal for the handling of sand, gravel, limestone, fertilizer, salt, or any other hard, abrasive materials.

Only with Sprout-Waldron BELT-SAVER Pulleys can you expect belt life increases from 50 to 400%. Get full details on the BELT-SAVER as well as on the complete line of S-W "Blue Face"-Cast Iron Pulleys today!

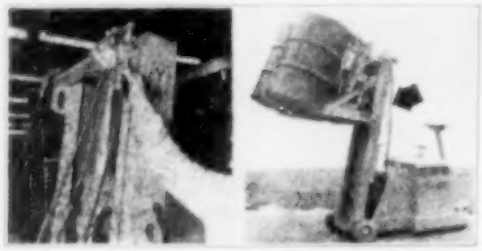
• WRITE FOR LITERATURE •

SPROUT-WALDRON & COMPANY
Manufacturing Engineers
S. WALDRON STREET MUNCY, PA.

BREVITY—Identify by IEN-3924 if you write the maker

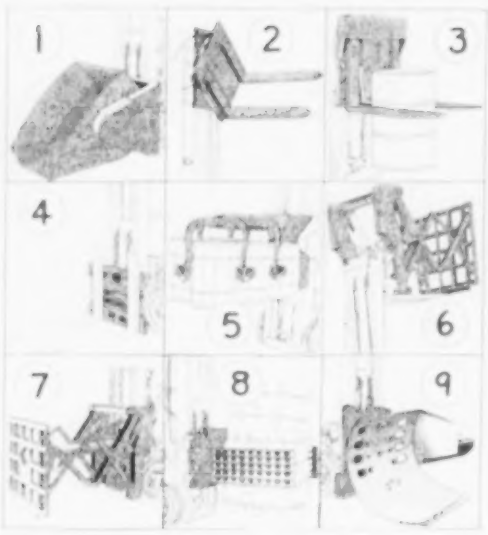
TRUCKS . . Line of attachments for company's power lift trucks

Source: YALE & TOWNE MFG. CO.
4528-32 Tacony St., Philadelphia 24, Pa.



The company has assembled a line of attachments of which individual units have been developed from time to time for specific use and is making them currently available in interchangeable application on its Lift King fork trucks with engine or motor drive and on its Workmaster walkie trucks in which the operator walks beside the power unit and controls it at a steering handle. Load capacities of the two classes of truck are 4 and 2 ton.

Hydraulic controls for the power-operated movements are centered at the operator's position. Hose lines lead to a central point on each truck. Push fittings are engaged at the time tools or the interchangeable attachments can be connected and disconnected quickly without loss of fluid.



1 is a hydraulically operated scoop to handle coal, gravel, loose chemicals. The scoop holds 27 cu. ft. and is rotated to mix or dump by hydraulic cylinders in the housing.

2 is a hydraulically operated rotating carriage to pour ingots or dump from bins. Rectangular tubes engaged by the forks prevent the load from falling off.

3 is a "load hugger" in which the two forks are pivoted to move laterally in and out in a grabbing action to pick up a load or release it through action of a hydraulic cylinder.

4 is a sideshifter with a hydraulic cylinder to move the forks laterally a short amount in either direction. The movement assists in fitting loads into narrow spaces.

(Continued on following page)

BREVITY—Identify by IEN-3925 if you write the maker

GET THE Thor STORY

ON PORTABLE ELECTRIC

IMPACT WRENCHES

Write for Circular JE-1176

DRILLS
TAPS
DRIVES SCREWS
SETS NUTS

Thor PORTABLE POWER TOOLS

INDEPENDENT PNEUMATIC TOOL CO., AURORA, ILL.

BREVITY—Identify by IEN-3926 if you write the maker

NEW LAWLOR MODEL 12-W HAS ADJUSTABLE HANDLE

With this new streamlined Lawlor, operators can now scrub, wax-polish floors under desks, machines, lockers, etc. Handle can be raised or lowered to any angle within an 80-degree arc. Strongly made in the Lawlor tradition for long, satisfying service.

Write for details about the 12-W and other Lawlor Equipment.

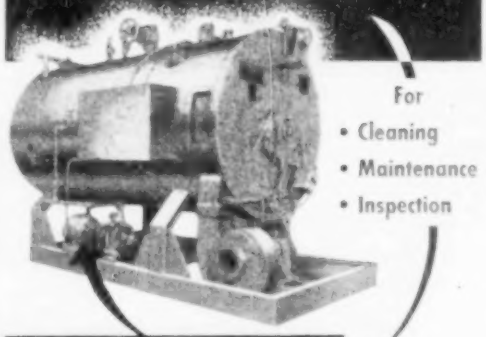
The Model 12-W is only one of the complete Lawlor line of quality floor maintenance units to take care of any food and rug floors.

Visit our Exhibit — Booth 100 — N.S.S.A. Expo. Oct. Nov. 7-10. Stevens Hotel, Chicago.

S. C. LAWLOR CO. Quality Floor Equipment for 50 Years
120 N. Aberdeen St., Chicago 7, Ill.

BREVITY—Identify by IEN-3927 if you write the maker

COMPLETE ACCESSIBILITY IS PROVIDED



For
• Cleaning
• Maintenance
• Inspection

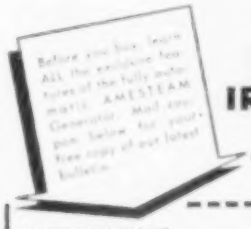
AMESTEAM GENERATOR design provides a better automatic Unit—soundly engineered to meet your needs.

All internal and external parts and auxiliaries are completely accessible. Front and rear flue covers, burner head and one-piece rear baffle are mounted on davit-type hinges. Sizes A-50 and larger. It is unnecessary to dismantle the entire front end to gain access to front tube sheet—and front need not be opened to clean tubes and furnace.

Controls are at eye-level, in a sturdy metal box to protect them against damage—auxiliaries under pressure vessel have ample space around them for inspection, lubrication or general maintenance.

It all adds up to the easiest boiler to operate, clean and maintain—and it generates steam quickly, efficiently and at low cost.

Sizes 10 to 500 HP—15 to 200 lbs.—arranged for Oil, Gas, Oil-Gas Combination.
Choice franchises still available. Write us.



AMES IRON WORKS
Oswego, N. Y.
Builders of Better Boilers since 1848
Manufactured under license in Canada by BOILCAD LTD., Montreal, P. Q.

AMES IRON WORKS
Box 1004, Oswego, N. Y.
Please send me your new free bulletin on AMESTEAM Generators.
Name
Company
Address
City State

▼ BRIEFITS—Identify by IEN-3929 if you write the maker ▼

ALOYCO

Introduces Better Sampling Valves in Stainless Steel

The use of valves for sampling liquids to insure accurate analytical data is an important phase in the control of many chemical processes. To eliminate the disadvantages of standard valves for this operation, Aloyco has developed valves specially designed for sampling. These are available in Aloyco-20, 18-8S, 316SMo and other alloys.

Write for Bulletin 47

Aloyco Sampling Valve 4750 shown has large chamber eliminating solid fouling, vertical chute, and flange may be welded to tank, pipe or vessel for sampling at some area from side wall. Other sampling valves, not shown, 4750, and 4750.

ALLOY STEEL PRODUCTS CO., Inc.

1311 W. Elizabeth Avenue Linden, New Jersey

ATLANTA • CHICAGO • HOUSTON • LOS ANGELES
NEW YORK • PITTSBURGH • WILMINGTON

▼ BRIEFITS—Identify by IEN-3930 if you write the maker ▼

RWAW

RESISTANCE WELDING AT WORK

14,400 SPOT WELDS PER HOUR

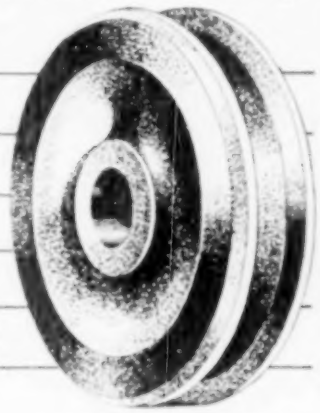
That is how one manufacturer stepped up his production through ingenious application of resistance welding. This 96-page illustrated bulletin describes this and many other cost-cutting, welding and tooling operations of live metal-working plants. You too can achieve a better product with increased production by writing direct to

SCIAKY

SCIAKY BROS., INC., 4911 W. 67th St., CHICAGO 38, ILL.

▼ BRIEFITS—Identify by IEN-3931 if you write the maker ▼

WROUGHT
STEEL
CRANE
WHEELS
by
STANDARD



Built for *extra* service by a pioneer producer of railroad wheels, under continuous quality-control from melting of metal to final finishing. Rugged, tough, strong, durable. Available in a range of sizes. Prices on request.

BALDWIN

STANDARD STEEL WORKS

The Baldwin Locomotive Works
Standard Steel Works Division
Burnham, Pennsylvania

(Continued from previous page)

TRUCKS . . Line of attachments

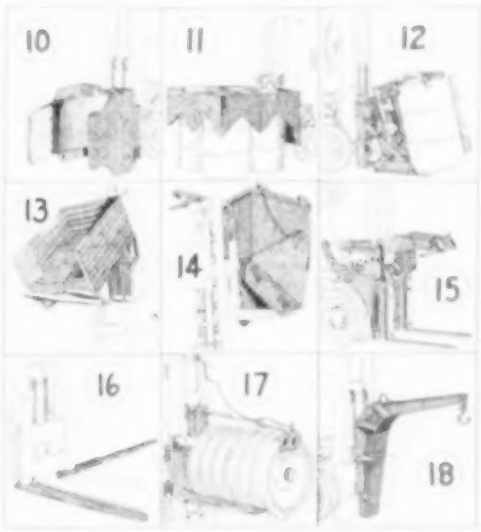
5 is an assembly of hydraulically operated fingers that are pushed forward to grip solid, flat, hinged, cylindrical, or square (round of stacking) items or pallets.

6 is a hydraulic pusher for applications with the forks on a truck. It enlarges a load which the truck has been brought into position and the load has been closed. It then is lowered.

7 is also a hydraulic pusher or wing a load off the load from a tow rather than from forks. Knots or the tow are made of steel wire or cable through which the tow is inserted.

8 is a hydraulic clamping attachment that applies to 32 to 40 gal. steel drums or cases or load pack at a time or crate. The arms provide are forward and outward to right action.

9 is a vertical pick-handling clamp of wire, an mechanical arm or paper, cardboard, cloth, rubber, leather. It will spread the roll or reverse to lapped. It can tie side.



10 is also a roll-handling attachment to roll up a roll and unroll 2 through 90 degrees. Hydraulic cylinders provide the clamping pressure. Rotation is by a hydraulic motor.

11 is a carrier for a number of drums picked up from a standing position or lowered, at time. The Wrapped frame permits operation without steel pressuring.

12 is a hook-equipped arm-type attachment to pick up drums and similar cylindrical containers. Hooks engage upper chime of two drums or fill them for carrying.

13 is a previously developed side-dumping attachment that engages a hook on the uprights to engage the rear end of the box. Lowering the forks then lifts the box as shown.

14 is also a side-dumping attachment that engages a bail from opening box and a hook that engages the bail top. Lower and the forks hinge the box holding to open position.

15 is an attachment to handle the pails and similar loads in which a clamping action is imposed on top of the load. Forks float down about 1 in. and pull down down to clamp.

16 is a transferable fork extension that spans over the standard forks to extend their length and provide stable support under a long load that would normally overhang.

17 is a flat-bed arm that drops over a pail such as the illustrated one wheels to hold them on a fork 135 for tank portation. When a cord is pulled the box is lifted to release.

18 is a crane-arm arm-mount ASIP, at hook at the upper supply and to pick up a load pipe on a hanger or lifting object that cannot be handled on a fork or platform.

All Makers of Items And All Other Products Are Listed In THOMAS' REGISTER . . Descriptions . . Ratings . . See Page 88

▼ BRIEFITS—Identify by IEN-3932 if you write the maker ▼

Chevrolet bodies brought to chassis floor line on selective Power and Free Conveyor.

POWER AND FREE CONVEYORS

give essential selectivity of parts and units to meet varying manufacturing specifications. Write for complete Power and Free data.

OFFICES IN PRINCIPAL CITIES

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MANUFACTURERS OF OVERHEAD AND FLOOR TYPE CONVEYORS

▼ BRIEFITS—Identify by IEN-3933 if you write the maker ▼

If you do or plan to, you should know about Bristol Series 500 Air-Operated Controllers for temperature, pressure, flow, liquid level, humidity and pH value.

These same automatic features will enable you to get better control results.

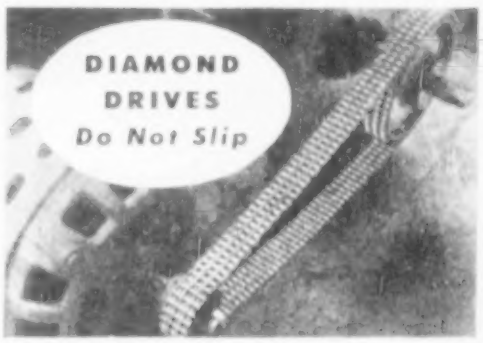
They are the product of over 80 years of experience in building and applying hundreds of thousands of recording and controlling instruments.

Write for our new Bulletin A120, giving complete information. THE BRISTOL COMPANY, 107 Bristol Road, Waterbury 20, Conn.

BRISTOL

Automatic Controlling, Recording and Telemetering Instruments

▼ BRIEFITS—Identify by IEN-3934 if you write the maker ▼



• Diamond Roller Chains are ideal for drives of a wide range of capacities—on short or long centers, —slow or high speeds,—and various speed ratios. There is no slippage,—speeds of driven shafts can be held accurately. Diamond Drives do not depend on friction,—therefore high speed ratios present no problem,—and bearing pressures are low. Write today for comprehensive Chain and Stock Sprocket Catalog 700. DIAMOND CHAIN COMPANY, Inc., Dept. 665, 402 Kentucky Ave., Indianapolis 7, Ind.

Offices and Distributors in all principal cities

Refer to the classified section of your local telephone directory under the heading CHAINS or CHAINS-ROLLER

DIAMOND ROLLER CHAINS

▼ BRIEFITS—Identify by IEN-3935 if you write the maker ▼

A "MUST" FOR EQUIPMENT

That is Exposed to Moisture, Acid Fumes, Rust and Corrosion

RAPID ASPHALT PAINT

Whenever wear, weather or chemical attack are dangerous to equipment, use Ruberoid Rapid Asphalt Paint for economical, durable protection. Composed of high grade bitumens, this asphalt paint is highly resistant to most acid and alkali conditions.

Ready to use, easily applied by brush or spray, it quickly dries to a tempered-like hardness. Almost any surface can take Rapid Asphalt Paint protection. Metal, wood, masonry or fabrics—this tough, waterproof paint adheres readily and permanently.

- High resistance to acid and alkali—protects against wear and exposure
- Heat resistant—stands temperatures up to 212° F.
- Highly penetrant—preserves wood
- Excellent electrical insulation qualities
- Prevents corrosion, rust, rot, and deterioration
- Tasteless and odorless when dry

Write for descriptive literature

The RUBEROID Co.

Building Materials for Industry, Home and Farm
Executive Offices: 500 Fifth Avenue, New York 18, N. Y.

▼ REPRINTS—Identify by IEN-3936 if you write the maker ▼

STURTEVANT EQUIPMENT INCREASES PRODUCTION AND CUTS COSTS

RING-ROLL MILLS

ROTARY FINE CRUSHERS

CRUSHING ROLLS

MOTO-VIBRO SCREENS

Sturtevant Mill Company, 113 Clayton St., Boston 22, Mass.

▼ REPRINTS—Identify by IEN-3937 if you write the maker ▼

Like A Protective Glove!

Hand protection is essential for workers who come in contact with oils. PREVENTO acts like a protective glove for sensitive skin. DOLGE recommends PREVENTO 200 for those who work with straight, non-soluble oils, or with solvents, and paints; PREVENTO 300 where coolant emulsion touches the skin. 300 is also an effective cleaner.

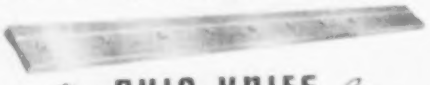
Write for literature

PREVENTO
The C. B. DOLGE Co.
WESTPORT, CONNECTICUT

▼ REPRINTS—Identify by IEN-3938 if you write the maker ▼

O.K. GANG SLITTER KNIVES *for longer service*

O.K. ROTARY SHEARS & BLADES *for maximum toughness*



The **OHIO KNIFE** *Co.*
CINCINNATI 23, OHIO, U. S. A.

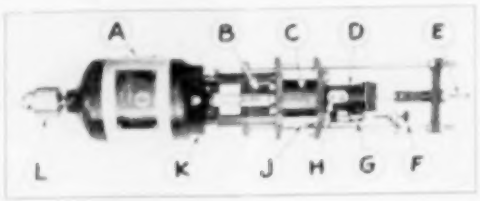
CLIP AND MAIL TODAY

THE OHIO KNIFE CO., CINCINNATI 23, OHIO
Gentlemen: Please send without obligation specific data on knives I have checked
☐ CIRCULAR KNIVES ☐ SHEAR BLADES
COMPANY
NAME
ADDRESS

▼ REPRINTS—Identify by IEN-3939 if you write the maker ▼

DRILLING . . Motor driven head has pneumatic feed, hydraulic control

Source: BLACK DRILL CO.
1402 E. 222nd St., Cleveland 17, Ohio



Model 1000 is new design of the company's self-contained drill head for rigidity, motor assembly and accurate provision for adjustment and maintenance. Operating principle is the same as in the original design, previously described IEN 206-B, in which the spindle is a double extension of the motor shaft to carry a chuck at one end and the feed and control mechanism at the other. The rotor, mounted on the shaft, moves axially within the motor housing when feed pressure is applied in the pneumatic cylinder.

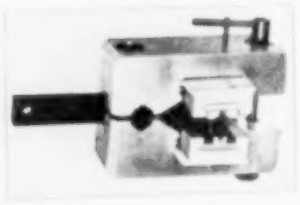
The assembly consists of the motor A, the ball-thrust bearing B against which feed pressure is applied in cylinder C, the hydraulic cylinder assembly D, the rapid traverse adjustment E that establishes the point in the stroke where the hydraulic control becomes effective. At F is a micrometer adjustment to limit the stroke length. At G is the pneumatic valve to the feed cylinder and at H is the screw adjustment to regulate oil flow and thus the feed rate. An optional solenoid control for the air is located at J. Electrical connections are made at K. The chuck L is a standard key-type unit.

Sizes range from ¼ to 1 hp. with stroke at 1½ to 2 in. maximum. Overall length of the 1-hp. assembly is 26 inches. The motor is 6⅝ in. in diameter. Speeds are 840, 1,150, 1,725 or 2,450 hp., with operation on 230, 440, 550 volt 3-phase 60-cycle ac. to meet given requirements.

▼ REPRINTS—Identify by IEN-3940 if you write the maker ▼

HONING . . Adjustable head carries stones for external honing

Source: SUNNEN PRODUCTS CO.
7902 Manchester Ave., St. Louis 17, Mo.



Work range is ⅜ to 2¾ in. in the company's new series of adjustable honing heads or hones for external finishing on proven such as hydraulic, pneumatic and valve parts superior pilgrim, price for the unit will produce [illegible] within [illegible] finish. It will correct "[illegible]" patterns, hold true size around holes and parts.

The work is held and rotated in the company's well-known machine and can be handled [illegible] the spindle of a lathe or drill or machine. The unit is provided [illegible] part and the whip is compliant [illegible] in the accompanying [illegible]. The [illegible] with a micrometer adjustment [illegible].

▼ REPRINTS—Identify by IEN-3941 if you write the maker ▼

THIS MAN WOULDN'T NEGLECT A MACHINE IN HIS PLANT

. . . yet he hasn't had a Chest X-Ray!

He checks every piece of mechanical equipment for cause for wear, lubrication, efficiency.

Yet he fails to take the simple precaution of a Chest X-Ray to make sure he does not have tuberculosis. Not because he's opposed to the X-Ray. Simply because he is not sufficiently informed—he just hasn't taken the time and trouble to find out regarding the convenience of the procedure.

A Chest X-Ray is the best step toward detecting tuberculosis in its early stages. And in its early stages it can be cured with the least loss of time from work.

As "I can't the man always, that one simple reason should make you get your Chest X-Ray today. But learn, see how serious this really is.

Between the ages of 15 and 55 tuberculosis leads all other diseases as a cause of death—although at no age are you safe from TB. Yet, if everyone does his part by getting a Chest X-Ray periodically, and the majority of cases that discovered are followed up, we can eliminate TB [illegible] as a public health "[illegible]".

Will you do your part today—get a Chest X-Ray. It may save your life.

Published in the public interest by

INDUSTRIAL EQUIPMENT NEWS
Thomas Publications Company
461 Eighth Ave. New York 1, N. Y.

▼ REPRINTS—Identify by IEN-3942 if you write the maker ▼

Completely New!

An Entire Series of NEW, SMALL ROTARY SWITCHES By "Diamond H"

Series 240 Switches

Both Types Available in These Circuits:

Series Parallel 1 level 6 position, Double Pole
Series Parallel 1 level 6 position, Single Pole
DB & DH, Double Pole and Single Pole
[illegible]
1 & 2, Double Pole and Others
15 A., 125 V. / 10 A., 250 V. 2, Pole
Underwriters Laboratories Approved

NO OTHER SWITCH WILL GIVE YOU ALL THESE LONG-WANTED FEATURES

- Compactness is unmatched by any other switch.
- Heat Resistance is completely efficient operation with ambient temperatures up to 400°F.
- Extreme Explosion-Proof safety is safe and protection of work-ing parts.
- High Overload Capacity — ratings are conservative.
- Proven Peak Performance thanks to long recognized "Diamond H" snap break principle and heavy silver contacts.
- Long Service Life — because of ingeniously simple design and rugged construction.

Write today for complete details on "Diamond H" Series 240 Switches for your applications.

THE HART MANUFACTURING COMPANY
203 Bartholomew Ave., Hartford, Conn.

▼ REPRINTS—Identify by IEN-3943 if you write the maker ▼

• Save Money, Floors, Equipment and Time by using DARNELL Casters

Pre-tested for Performance

DARNELL CASTERS

Free Manual

DARNELL CORP. LTD.
Long Beach 4, Calif.
60 Walker St., New York 13, N. Y.
36 N. Clinton, Chicago 6, Ill.

▼ REPRINTS—Identify by IEN-3944 if you write the maker ▼

Robertshaw

SINGLE UNIT time, temperature and motor CONTROL FOR LAUNDRY DRYERS

Combines heating and timing controls in a single unit. Handles both motor and electrical heating circuit. Amount of moisture and weight of clothes scientifically determine length of time dryer operates to automatically produce degree of dryness desired by operator. Control runs heat switch when correct internal temperature is reached, but motor continues to run until all stored heat in drying chamber has been utilized.

Economical to install—produces maximum operating efficiency of appliance. Write for information.

To save and industry, EVERYTHING'S UNDER CONTROL

Robertshaw
THERMOSTAT DIVISION
ROBERTSHAW-FULTON CONTROLS COMPANY
YOUNGWOOD, PENNSYLVANIA

IEN-3945

IEN-3946

The
STANDARDAIRE
PRECISION BUILT
Axial Flow **BLOWER**

THE STANDARD STOKER CO · INC ·
Standard Stoker
NEW YORK · CHICAGO · ERIE · MONTREAL

IEN-3948

AIR CONDITIONING . . Duct units to clean, heat, cool and deliver air

Source: WESTINGHOUSE ELECTRIC CORP
34 Damon St., Boston 35, Mass.

IEN-3949

PLASTIC . . Dust repelling liquid for use on polystyrene plastic parts

Source: BEE CHEMICAL CO
13797 South Ave. "O", Chicago 33, Ill.

Samples available on serious request

IEN-3950

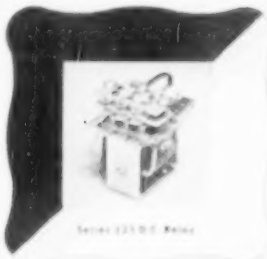
TRANSFORMER . . Custom built to meet special requirements in service

Source: HIGHLAND ENGINEERING CO
35 Holman Blvd., Hicksville, N. Y.

IEN-3951

ONE OF THE LINE *of dependable*
GUARDIAN CONTROLS

FOR *Easy Sailing* ALONG YOUR ASSEMBLIES . . .



GUARDIAN ELECTRIC
1620-G W. WALNUT STREET CHICAGO 12, ILLINOIS

IEN-3952

Heat control problem that defeated other thermostats
solved by
Thermoswitch unit

Fenwal
APPLIANCE TYPE
THERMOSWITCH
SENSITIVE *But only to heat*

IEN-3953

NEW
G-E SURFACE ROUGHNESS
SCALES

Scales enable you to determine quickly if machined parts meet specifications.

...cut production costs 3 WAYS

1. Engineers and designers need only to refer to scales to specify finishes—reduces delays caused by misunderstandings.

2. Inspectors can handle additional work because they can use sight and touch to compare the finish of machined parts with specified finishes.

3. Machinists turn out improved work because they can avoid making unnecessarily fine or too-rough finishes.

IMMEDIATE SHIPMENT. List Price $16.55. Write to Special Products Div., Apparatus Dept., General Electric Co., Schenectady, N.Y.

GENERAL ELECTRIC

IEN-3954

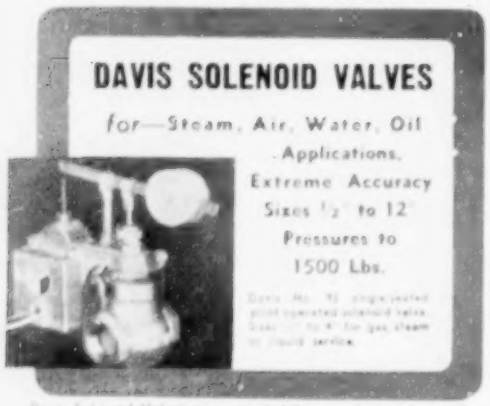
THIS POINT WILL END YOUR LOOSE SET SCREW PROBLEMS

UNBRAKO

SELF-LOCKING HOLLOW SET SCREW
WITH MONEY-SAVING KNURLED POINT
"WON'T SHAKE LOOSE"

SPS STANDARD PRESSED STEEL CO.
JENKINTOWN 14, PENNSYLVANIA

▼ BRIEFIT—Identify by IEN-3955 if you write the maker ▼



Davis Solenoid Valves are operated by any device that will make or break an electrical circuit, and are furnished either normally open or normally closed — explosion proof if desired.

Davis valves adapted to solenoid operation includes: single seated valves for high or low pressure, balanced valves, butterfly valves, and 3 or 4-way pilot valves. Reciprocating or rotary stem type. For extreme accuracy, the Davis Two-Step Solenoid Valve is available.

WRITE TODAY FOR DETAILS

DAVIS REGULATOR COMPANY

2129 SOUTH WASHTENAW AVENUE, CHICAGO 8, ILL.

▼ BRIEFIT—Identify by IEN-3956 if you write the maker ▼

HOW TO GET MORE PROTECTION FOR METAL SURFACES . . . INSIDE OR OUT

THIS NEW FREE BOOK tells how! Contains important information on proper application, paint selection and the high resistance of aluminum paints to moisture, fumes, heat and wear. Alcoa does not make aluminum paint, but we have prepared this book to help you buy and apply it right.

If you've been buying paint without the information this book contains, if you've never used the superlative aluminum paints it describes—your paint knowledge is out of date. This book tells how to get the best aluminum paint and apply it for greatest service. Includes coverage tables, facts on correct types of ready-mixed aluminum paints for metal, masonry, all wood surfaces, inside or out—and for heated surfaces. Answers many important painting questions.

This important buying and application information will be sent by return mail.

MAIL THIS COUPON TODAY!

ALUMINUM COMPANY OF AMERICA
Paint Service Bureau, 1734 Gulf Bldg.
Pittsburgh 19, Pennsylvania

Please send me free copy of painting with aluminum

Name (Please print)

Address

City State

Look for this shield on aluminum paints made by many paint manufacturers using ALCOA PIGMENTS.
The RIGHT aluminum paint for this job is ALUMINUM METAL & MASONRY PAINT.

▼ BRIEFIT—Identify by IEN-3958 if you write the maker ▼

FILTERING . . Cartridge type unit to purify water at drinking outlets

Source: SUNROC CO.
50 Sunroc St., Glen Riddle, Pa.

Metal housing on this new water purifying filter is equipped with feet to mount on a wall or a fixture in a drinking water line or back of a water cooler. The housing encloses a replaceable cartridge-type element through which the water passes. A chemical tradename [illegible] is contained in the cartridge to remove objectionable foreign matter, odors, etc. An indicator signals need for replacement at infrequent intervals. A new cartridge can be inserted without tools.

▼ BRIEFIT—Identify by IEN-3959 if you write the maker ▼

GRINDING . . Bench type machine, ball bearing motor drives 6 in. wheels

Source: STANLEY ELECTRIC TOOLS DIV.
478-82 Myrtle St., New Britain, Conn.

No. 36 is a new 6 hp bench type grinding machine for use in polishing, buffing, grinding, wire brushing. The motor operates on 115/230 volts, [illegible] cycle, [illegible] phase. A toggle switch is mounted on the front of the housing. Rubber feet are provided on the base.

Equipment includes wheel guards and rests, [illegible] wheels and a [illegible] extension [illegible] 12 in. for the best machine in the company's line.

▼ BRIEFIT—Identify by IEN-3960 if you write the maker ▼

FASTENING . . Lock nut and washer secures inner bearing race on a shaft

Source: LINK-BELT CO.
305-9 N. Michigan Ave., Chicago 1, Ill.

Inner races of [illegible] roller bearings can be mounted on a shaft against a shoulder, where a step on the shaft is threaded to take [illegible] nut and [illegible] washer. Since [illegible] shafts [illegible] in diameter, the hole diameter of the nut is [illegible] in. [illegible]. The nut applies the washer against the face. The washer has an [illegible] that fits in a [illegible] in the shaft to prevent [illegible]. Other [illegible] parts are shown in the [illegible] Catalog 2248.

All Makers of These And All Other Products Are Listed In THOMAS' REGISTER . . Descriptions . . Ratings . . See Page 18

▼ BRIEFIT—Identify by IEN-3961 if you write the maker ▼

Hundreds of [illegible] Power Plants [illegible] Thermix Mechanical Draft Systems [illegible] Thermix [illegible] Equipment [illegible] Thermix [illegible] Equipment [illegible] Thermix [illegible] Equipment

BEFFITT—Identify by IEN-3965 if you write the maker

SPRAYING SYSTEMS

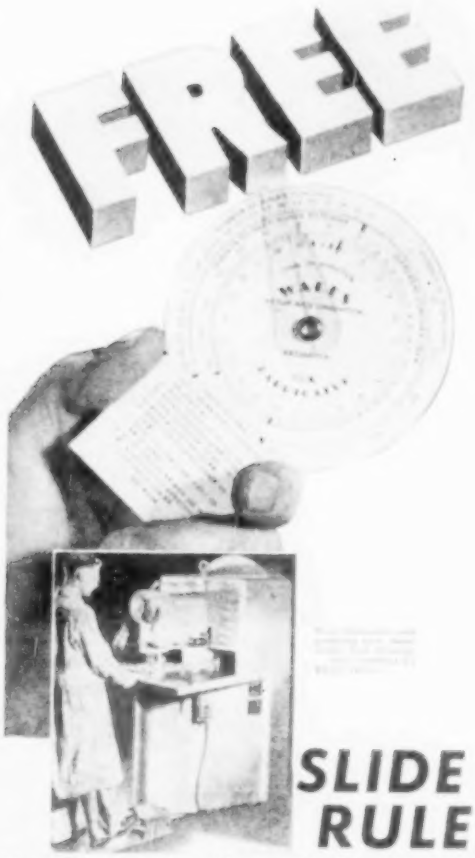
Spray Nozzles

used everywhere in industry for BETTER SPRAYING at LOWER COST...

Spraying Systems Co. engineered spray nozzles are cutting production costs everywhere in industry . . . by providing better spray nozzle performance and resultant better processing or equipment operation. Get the facts today by writing for General Catalog 22 or Pneumatic Atomizing Catalog 23.

SPRAYING SYSTEMS CO.
Engineers and Manufacturers
3206 RANDOLPH ST. • BELLWOOD, ILLINOIS
Suburb of Chicago

BEFFITT—Identify by IEN-3966 if you write the maker



SLIDE RULE

For Cost Estimating, Machine Loading and Subcontract Pricing with

WALES FABRICATORS

• Now, you can figure the time and cost of each part and complete service on Wales Fabricator whether the part is in the engineering, planning or production stage.

There is nothing like this revolutionary Wales Fabricator. It punches, notches and nibbles. Water-exclusive Hydra-Nu-Matic Drive is simple in its simplicity of design and operation . . . so simple, in fact, the vibration and noise is practically eliminated at 165 strokes a minute. This drive, plus Wales patented "Quick-Change" System makes possible startling "never-heard-of-before" cost savings.

Write for your FREE Wall Slide RULE and complete THE WALES METHODS, with your present operations.

WALES-STRIPPIT CORPORATION
Designers & Builders of Machines
361 PAYNE AVENUE, NORTH TONAWANDA, N. Y.
Sales Offices in Principal Cities
Write for copy of Catalog 54, Metal Fabricating Machines

Specialists in Punching and Notching Equipment

BEFFITT—Identify by IEN-3968 if you write the maker

VALVE . . Two to 4-way assemblies, pressure operated, for air or liquid

Source: C. B. HUNT & SON INC.
1919 E. State St., Salem, Ohio

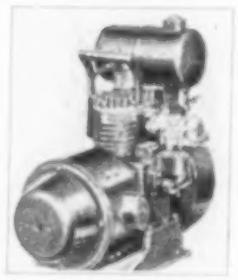
Two solenoids are mounted at opposite ends of this new Fluid-Pilot valve to operate pilot valves through up to 4-way assemblies for pressure operation of the valve in one direction and then the other. The assembly is a Fluid-Pilot development of the Quick-Acting valve previously described. IEN-3968 also which mounted a single solenoid and could not guarantee positive valve action. Pilot Sq. 6, 8, 10 is public. Pressure rating is 0 to 200 lb. air or water to the pounds.

Construction includes a brass or bronze housing and [illegible] stainless steel, non-metallic packing and stainless steel piston rod with spring return. The right weight of the pilot pistons and fast short travel permit high control valve operation.

BEFFITT—Identify by IEN-3969 if you write the maker

GENERATOR . . Portable engine driven rates 350 and 750 watts, 110 volt ac.

Source: KOHLER CO.
1230 High St., Kohler, Wis.



Emergency light and spare [illegible] of portable electric [illegible] and appliances are the market of applications for this new [illegible] generator. The smaller unit rates 350 watts, weighs 30 pounds. The larger power 750 watts. Both can be equipped with accessories [illegible] and is silent when a connected power circuit is closed and is deep when it is opened. The engine is single cylinder [illegible] and is self-contained with a fuel tank and carrying handle so as shown in the [illegible] unit illustration.

BEFFITT—Identify by IEN-3970 if you write the maker

PLASTICS . . Commemorative issue of house publication marks company's 40th year

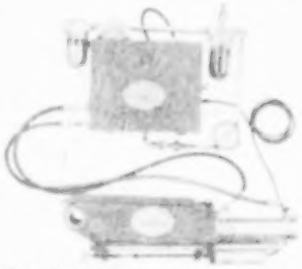
Source: [illegible]
[illegible] Street, New York 17, N. Y.

Special edition of "Tenax-Tic Review" describes growth of the company's plastic materials from 1910 to the present. Significant developments are noted. Front cover is year in the model period. Other articles are about research activities, patent developments during 1949. The company will be happy to send you a copy on request.

All Makers of These And All Other Products Are Listed in THOMAS' REGISTER . . Descriptions . . Ratings . . See Page 56

BEFFITT—Identify by IEN-3971 if you write the maker

- NEW PRECISION!
- NEW SAVINGS!
- MULTIPLE TAPPING WITH MULTIPLE DRILL HEAD!
- NEW FLEXIBILITY!



NEW AIR POWER FEEDS

For Drill Presses

A [illegible] rotary, air-powered feed provides proper thrust and correct drilling action for practically any size drill working in any drillable material. Pressure controlled by [illegible] Beckett H14 Air Valve. Tap highly accurate threads *without a tapping head* and accuracy on depth control. Thrust instantly reversed on breakthrough no hydraulic checking devices required when using small drills. Speed of stroke *infinitely* variable. Sturdy—compact—quickly installed. Four feed types in standard or heavy duty models: (1) Drill. (2) Drill with dwell. (3) Drill, chip clean and dwell. (4) Drill and tap. *Write now for bulletin giving complete details.*

BECKETT Drill Press Feeds
BECKETT-HARCUM CO., 1142 Wayne Rd., Wilmington, Ohio

BEFFITT—Identify by IEN-3972 if you write the maker

Sharp-cutting POINTS

of the PRATT & WHITNEY KELLER CARBIDE DI-BUR

PRODUCE THESE *harmless* GRANULAR CHIPS

. . instead of annoying, sharp, painful slivers from tough or hard metals. That's because DI-BURS are made exclusively by Pratt & Whitney . . . to rigid standards of quality and craftsmanship . . . master ground by machine and "diamond" centerfluted, with correctly staggered, sharp-cutting points.

DI-BURS give fast, smooth cutting, even on the hard . . . and they hold their shape through many resharpenings.

For complete engineering information, write to: 21 Charter Oak Boulevard, West Hartford, Conn.

PRATT & WHITNEY
Division of Pratt & Whitney Aircraft
WEST HARTFORD, CONNECTICUT

KELLER *Carbide* DI-BURS

BEFFITT—Identify by IEN-3973 if you write the maker

Kester Solder

Kester Flux-Core Solders are made only from newly mined grade A tin and virgin lead. Flux-cores are chemically and scientifically correct.

Eliminates Rejects

Rejects are eliminated when the correct solder for the job is used. Kester makes over 300,000 different types and sizes of Flux-Core Solder.

Faster

Using Kester "Speed" Solders will increase the output of your assembly lines.

KESTER SOLDER COMPANY
4207 Wrightwood Avenue
Chicago 39, Ill.
Newark, N. J. Brantford, Ont.

KESTER SOLDER

SEND FOR FREE MANUAL "SOLDER AND SOLDERING TECHNIQUE"

BEFFITT—Identify by IEN-3974 if you write the maker

THE NEW HALLOWELL "700" Steel Platform Trucks

All-steel body accomplishes excess weight, permits heavier loads per truck.

Heavy-duty construction lengthens truck life, reduces maintenance costs to the minimum point.

New, functional design increases strength, provides better load distribution, makes handling easier.

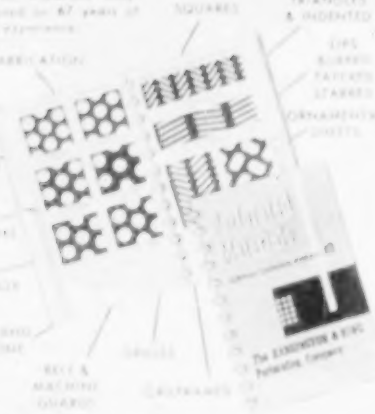
Write for your copy of Bulletin 718.

HALLOWELL
MATERIALS HANDLING EQUIPMENT
See us at Booth 728, ASTE Exposition, April 10-14, Convention Hall, Philadelphia

SPS STANDARD PRESSED STEEL CO.
JENKINTOWN 14, PENNSYLVANIA

IEN-3975

What is Perforated Material?
Where to use Perforated Material
Why H & K Perforated Material?



Be sure you have H & K General Catalog 62 —Write for it

The Harrington & King Perforating Co.

IEN-3976

HERE'S HOW **Panqborn** CAN SAVE YOU MONEY

No matter what kind of metal parts you make castings, forgings or stampings — whether they're large or small, intricate, plain or fragile — Panqborn Blast Cleaning equipment cleans them of a profit! Rust, grime, dirt, paint, gum, sand disappear in record time. Breakage costs go down while cleaning quality improves!

Scores of Panqborn users report labor savings from $5,000 to $11,000—savings in cleaning time up to 95.8%. In many cases one Panqborn Blast Cleaning unit replaces five old-fashioned machines!

If you want low cost, high quality cleaning like this — see Panqborn first! Panqborn has more than 45 years of blast cleaning experience. Panqborn engineers are well qualified to give you the correct cleaning equipment you need.

FIND OUT HOW MUCH YOU CAN SAVE

To get full details about Panqborn equipment send coupon today for Bulletin 1200. Address PANQBORN CORPORATION, 293 Panqborn Blvd., Hagerstown, Maryland.

Panqborn

BLAST CLEANS CHEAPER

with the right equipment for every job

MAIL TODAY PANQBORN CORPORATION, 293 Panqborn Blvd., Hagerstown, Md.

IEN-3978

PROTECTING . . Aprons and clothing for workers in contact with chemicals

Source: STANDARD SAFETY EQUIPMENT CO. 226 W. Ontario St., Chicago 10, Ill.

Gra-Lite fabric comes in a new light weight impregnated fabric which the company has developed and is prepared to supply in standard or specified thickness of protective aprons and clothing. The fabric may be treated to meet given requirements in contact with organic acids. Inorganic compounds, solvents.

Characteristics include resistance to acidness and not corrosive. Freedom from rust, rot and clogging. Stockings at low temperatures. Service to each garment are treated following lubrication for several years. The company offers to design service which meets your requirements. Samples of the treated fabric are available for testing.

IEN-3979

BEARING . . Miniature ball design twelve sizes start at .1181 inch od.

Source: LANDIS & GYR INC. 104 Fifth Ave., Rm. 1402, New York 11, N. Y.

Series 80 is a new design in the company's miniature ball bearing line with the balls assembled in a retainer and race in a way that permits operation to handle both radial and thrust loading. The smallest ball in the line has a .020 in. bore and .1181 in. outside diameter. Experimental quantities are in stock. Production quantities require six eight weeks.

IEN-3980

HEATING . . Gasoline torch, half-pint size, heats to 1,700 deg. F.

Source: TURNER BRASS WORKS 825 Park Ave., Sycamore, Ill.

No. 58 for gasoline and No. 101 for gasoline and Tiny-Tim are two new torches in which a brass main pressure with the work that is to be done and by the burner with the orifice done in the tank for the required pressure gauge. The tank is made of brass. It is 2½ in. in diameter and holds 7½ oz. of fuel, enough for 3½ hr. of full-open operation. The burner is brass with a chromium and corrosion free tip is interchangeable.

All Makers of These And All Other Products Are Listed in THOMAS' REGISTER — Descriptions — Ratings — See Page 96

IEN-3981

POWER AT IDEAL SPEED WITHOUT WASTE

WITH **LINK-BELT P.I.V.** GEAR **SPEED CHANGER**

The actual speed for your operation is available in seven ratios. The Link-Belt P.I.V. Gear Speed Changer. Special Gear plus automatically varies the input speed, assures maintenance of speed, regardless of load. The possibility of slip is minimized.

Input shaft is entirely disengageable while machine is running.

Also you have supplemented with the Link-Belt P.I.V. Gear has an immense advantage. Data Book 1874-B fully describes it, with dimensions and illustrations.

LINK-BELT COMPANY

SEND NOW for Book No. 1874-B

IEN-3982

another **NEW Quick-As-Wink** development

Type "DS" double solenoid pilot operated single plunger control valve

▶ smaller, shorter stroke solenoids — lower amperage
▶ simpler electrical controls — high air economy

● Small solenoids reversing through only a ⅛ in. stroke move small pilot valve plungers to apply air to operating pistons that move the main valve plunger back and forth. All operating parts are enclosed, yet accessible with a few screws. Reduced amperage eliminates overheating relays, simplifying control circuits. Positive half cycle operation without destructive impact, reduces maintenance and minimizes trouble due to voltage variations ±5% to ±7 volts 2, 3, and 4 way actuator. Solenoid control both directions of automatic return in one direction. Send for Data Sheet No. 3611. It gives full details.

C. B. HUNT & SON, Inc., 1952 E. Pershing St., Salem, Ohio

"The Higher the Pressure — The Tighter the Seal"

Quick-As-Wink

AIR AND HYDRAULIC CONTROL VALVES

IEN-3983

- Furnished in all standard analyses
- Cast and Turned Rounds up to 10
- Extruded and Drawn Rounds up to 4½
- Extruded and Drawn Hexagons up to 4
- Extruded and Drawn Squares up to 5

Write for folder TITAN Large Diameter Rods

Titan

Metal Manufacturing Company
Bellefonte, Pennsylvania
Representatives in Principal Cities

Quality Alloys by Brass Specialists
Brass and Bronze Rod • Forgings • Die Castings • Welding Rods

IEN-3984

SIER-BATH SCREW PUMPS solve the toughest pumping problems!

PUMPS automatically follow Sier-Bath Gear Units to deliver pulsation free, positive flow of fluids up to 100 hp.

Simple design lets you mount pump, motor, and drive assembly on single gear base. Sier-Bath Screw Pumps give you the power and dependability necessary for efficient, low cost moving of high viscosity materials.

SIER-BATH SCREW PUMP

THESE FEATURES CUT MAINTENANCE COSTS

1. No pistons, contact between rotors (impellers) No.
2. Large accumulator efficiency in fluids with varied viscosities.
3. Axial flow fluid ends to handle abrasive liquid bearings, high or low speed, positive operation.
4. Gear unit is isolated, so lubricant contamination is eliminated, and bearing life is increased. Gear unit is sealed, while pump is running.
5. Heavy duty service-built shaft, oversized ball and roller bearings, long life sealing glands.

Available in horizontal or vertical mounting, complete with motor and base, or mounted individually, ready for bolting.

ALSO MANUFACTURERS OF "GEARED" PUMPS, PRECISION GEARS AND GEAR COUPLINGS

Sier-Bath GEAR and PUMP CO., Inc.

9258 HUDSON BLVD. NORTH BERGEN, N. J.

IEN-3985

When Electric Power Fails . . .

Prevent Spoilage of Materials in Process

with

ONAN STANDBY ELECTRIC PLANTS

An Onan Standby Electric Plant, equipped with automatic controls starts by itself and takes over the job of supplying electricity whenever commercial power fails. Processing and assembly lines, refrigeration, heating and ventilating systems, and lighting continue to operate with only a few seconds of lost time. This insurance is inexpensive, one power failure may pay the entire cost of the electric plant. Built for heavy duty use, Onan plants will run continuously if necessary. 1,000 to 30,000 watts A.C. Operate on natural gas, gasoline or with Diesel engine power. Shipped complete. Ready to run.

WRITE FOR **FREE** FOLDER

D. W. ONAN & SONS INC.
2731 Royalston Ave., Minneapolis 5, Minn.

IEN-3986

Take the "ugh" out of tough cutting jobs!

KETT UNIVERSAL SAW

Z-I-P-S THROUGH SHEET METAL, PLYWOOD, PLASTICS AND COMPOSITION MATERIAL!

IN the shop or on the job, here's the handiest handful of cutting power you've ever used. The Kett Saw cuts plastics and other soft material up to ¼" thick, aluminum to 3/16", and mild steel and galvanized metal up to 10 gauge, for intermittent use. No starting hole required to cut straight lines or curves of 6" radius or larger. Tough, long lasting blades are easily changed.

For complete information and action photos, write for Bulletin A-4.

THE KETT TOOL COMPANY
5 EAST THIRD STREET CINCINNATI 2, OHIO

IEN-3987

3 Sturdy SMALL Shut-off Valves for EXTRA HEAVY Duty

Bulletin 8265

Bulletin 8265 . .

Bulletin 8268 . .

Bulletin 8271 . .

These ASCO Valves are positive, fast-acting shifting low maintenance. Modified types of this series include valves that "open" rather than close on de-energizing — adjustable more flow and bypass flow valves — and explosion-proof valves. All are described in detail in our catalog section 6-F. Write for your copy.

ASCO Automatic Valves

Automatic Switch Co.
353 Lakeside Avenue Orange, New Jersey

When in need of Automatic Transfer Switches, Remote Control Switches, Contactors, Relays, and Specialized Electromagnetic Controls, come to us.

IEN-3988

PYROMETER . . Optical design for use at furnaces, soaking pits

Source: LEEDS & NORTHRUP CO.
4934 Stenton Ave., Philadelphia 44, Pa.

Keystone Sensitive is a low cost, rugged optical pyrometer designed for quick readings. Instrument measures temperature from 1000° to 3000°F. Operates on 115 volt, 60 cycle current. Unit is compact, 8" x 8" x 8", and weighs only 7 lbs. Its compact size makes it easy to install and move. The instrument is easy to keep in good condition. The one piece housing and mounting flange protects the instrument against damage.

Refractory materials in the most various forms are of increasing importance in modern industrial processes. Refractory materials are used in furnaces, kilns, and other equipment for operation at temperatures up to 3000 deg. F. Depending on temperature to which the refractory will be exposed, the effect of the refractory on the product being processed, and other factors, the refractory material must be selected with care.

IEN-3989

PAINTING . . Water white material to brush or spray on rusted metal

Source: SPECO INC.
7306-10 Associate Ave., Cleveland 9, Ohio

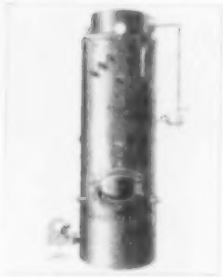
In quart cans to 55 gal. drums

Rustrem Clear is a water white, non-toxic, non-flammable, non-corrosive, non-toxic, Rustrem Clear and Rustrem Black are protective maintenance coatings for use on a variety of surfaces. The new material is water white, dries in 30 to 60 minutes, and has good gloss. It is suitable for brushing and spraying. Rustrem Clear and Rustrem Black are available in quart cans to 55 gal. drums.

IEN-3990

BOILER . . Vertical fire-tube unit, for 100 lb. service, rates 3 to 15 hp.

Source: YORK-SHIPLEY INC.
18 Jessop Place, York, Pa.



An oil burner, gas burner, or combination burner is the heating of this new, compact, self-contained boiler. Four sizes of combustion space are available, rated at 3 to 15 hp. The boiler is designed to comply with the ASME Code for working pressures to 100 psi. It is a modern boiler in appearance. There is a downward gas passageway in the center of the boiler. The gas passes through the tubes and is exhausted at the rear. Shipping weights are 1,200 to 2,400 pounds.

Fire tube is the type that has a fire in the tubes and water in the shell. The hot gases pass through the tubes and heat the water which surrounds the tubes. The boiler is a vertical one. The burner is mounted on the top. Shipping weights are 1,200 to 2,400 pounds.

All Makers of Every Kind of Equipment Are Listed in THOMAS' REGISTER — Descriptions — Ratings — See Page 10

IEN-3991

This Is A War Child . .

You can help her, or thousands like her by becoming a Foster Parent. It costs only $15 a month. You will receive a case history and photograph of the child. Correspondence through our office is encouraged.

For further information write

FOSTER PARENTS' PLAN FOR WAR CHILDREN
55 West 42nd St., New York City 18

IEN-3992

"Best Buy" for HANDLING DUST FUMES

• These sturdy, efficient all-welded steel plate exhausters can do a low cost, plant cleaning job for you. Available in wide range of sizes with MA—Wheels for handling gases, fumes, dust, or with MW—Wheels for conveying materials, both wheels interchangeable. WRITE FOR BULLETIN 4570 for all construction and performance details.

BUFFALO FORGE COMPANY
496 Broadway Buffalo, N. Y.

General Blower & Force Co., Ltd., Kitchener, Ont.
Branch Offices in All Principal Cities

"Buffalo" **INDUSTRIAL EXHAUSTERS**

IEN-3993

NEW **DRIVE-PIN RIVET**

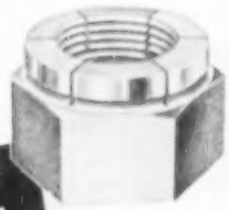
drive rivets with a hammer and *save time*

At home or strong nails, the CHERRY PIN Company's series of CHERRY Pin RIVETS will save you valuable time on sheet metal assembly jobs. By special method — the special nail — these rivets are permanently set since it forming tight clinch to fasten bending in to framework where rigidity is good enough to withstand hammering. For more flexible materials, use allied Cherry Blind Rivet.

The method of drawing the pin into the Aluminum Rivet has head of the rivet against the work, so that the rivet is forced tightly against the material beneath. When the pin breaks the pin-locking mechanism of the rivet, the pin fast and rivet expanded and locked in place, a tight bond, no rattle, blind rivet.

CHERRY RIVET COMPANY
131 Winston Street, Los Angeles 13, Calif.
Atlantic Department: 3-110

IEN-3994



. . . WON'T SHAKE LOOSE

FLEXLOC

ONE-PIECE SELF-LOCKING NUTS

The FLEXLOC is one-piece (all-metal) — has ample tensile and long life. It is a Stop and Lock Nut that can be reused many times. Its "chuck-like", resilient locking segments lock the FLEXLOC securely in any position on a threaded member. It positively "won't shake loose", yet can be removed easily with a wrench.

Write for Catalog 409 for full information.
See us at Space 106, A.S.T.E. Exposition, Nov. 6-14, Convention Hall, Phila.

SPS STANDARD PRESSED STEEL CO.
JENKINTOWN 14, PENNSYLVANIA

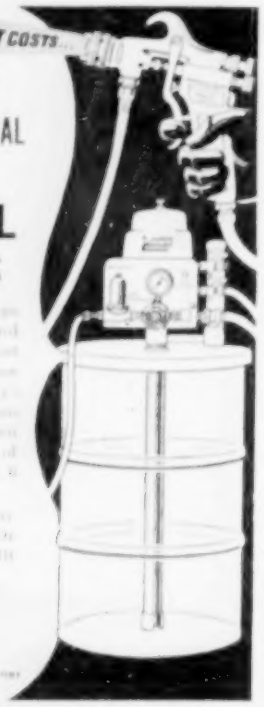
▼ BRIEFIT—Identify by IEN-3995 if you write the maker ▼

SPEED WORK, CUT COSTS

SPRAY FINISHES RIGHT FROM ORIGINAL DRUMS WITH

VERSATAL

MATERIAL PUMPS



The improved Versatal Pumps provide easier handling and [illegible] Proportionals boost range of pot manifold. Dispense over a range of light or heavy [illegible] from original containers, even through as much as 1000 ft. of hose [illegible] Turn up to 8 [illegible]

Write today for full story. Dept. B66, 1800 Dempster, Chicago 14, Ill.

ALEMITE Versatal

Another Product of Stewart-Warner

▼ BRIEFIT—Identify by IEN-3996 if you write the maker ▼

LUBRICATE Hard-to-Reach Spots

with NUGENT Multiple Oilers

For machinery with many enclosed or hard-to-get-at bearings, you can reduce lubrication costs with a Nugent Multiple Oiler. Oil from a pump or reservoir is piped into the Oiler and is fed to the bearings by means of tubing through independently adjustable needle valves.

Nugent Multiple Oilers are furnished in a variety of types with any number of feeds to meet every requirement.

Write for descriptive literature.

Wm. W. Nugent & Co., Inc.
4143 N. Ravenswood Ave. CHICAGO 13, ILLINOIS

Oil Filters, Oiling and Filtering Systems, Telescopic Oilers, Oiling Devices, Sight Feed Valves, Flow Indicators — Representatives in Principal Cities

▼ BRIEFIT—Identify by IEN-3997 if you write the maker ▼

Know the scope of the MARSH line of pressure gauges

There are literally thousands of combinations of types, ranges, case styles and connections in the broad Marsh line of pressure, vacuum and compound gauges. As a result, gauge requirements that would be "special" in other lines are often standard at Marsh.

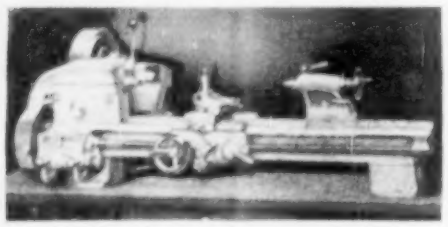
This means that we can meet your gauge needs for no old nor new commitments whatever the service conditions against or gauge requirements. Let us know the scope of Marsh Instruments you ask for. We are Free Offered.

MARSH INSTRUMENT CO.
[illegible] Chicago 24, Ill. [illegible] Marsh [illegible] Chicago 24, Ill.
Export Dept. 111 E. 44th St., New York 17, N. Y.

▼ BRIEFIT—Identify by IEN-3998 if you write the maker ▼

LATHE . . Bench mounting design, swings 10 in., 16 to 34 in. on centers

Source: SOUTH BEND LATHE WORKS
301 E. Madison St., South Bend 22, Ind.



Light Ten is a new bench lathe in the company's line. It is available in four bed lengths or lathe 16 to 34 in. between centers. Head is [illegible] quick change gear box for 16 feeds in inch, 16 feeds in mm, [illegible] in per revolution of the spindle or 16 threads right or left hand between 4 and 224 per inch. The spindle speeds are 48 to 700 rpm in a low range and 90 to 1425 rpm in a high range. Either can be specified as a list price of $[illegible] to $434.

Standard equipment includes the horizontal motor drive assembly, compound rest, tailpiece, tool post, motor, spindle, [illegible] supplies the electrical equipment and bench [illegible] supplies the electrical equipment and bench.

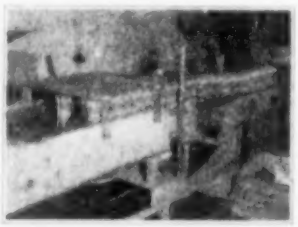
The spindle is mounted on bronze sleeve bearings and is equipped with an adjustable face driver. It carries a Clearthrough Hole Valve collet to 5/8 in. [illegible] Threaded nose. Cut gears and shafts operate in oil from a capacity distribution system. The tailstock is designed to set over for taper turning and has a micrometer collar on the feed screw for [illegible] adjustment.

The carriage is equipped with a worm driven by a spline on the feed screw and a safety mechanism to prevent possible [illegible] Driving or facing feeds when the thread cutting half nuts are engaged. The compound rest is adjustable to [illegible] and the cross-feed screw carries micrometer dials. A micrometer stop on the [illegible] will be sent on request. For the Bench [illegible]

▼ BRIEFIT—Identify by IEN-3999 if you write the maker ▼

CONVEYING . . Unscrambling table prevents tilting in tapered containers

Source: ISLAND EQUIPMENT CORP.
27-03 Bridge Plaza N., Long Island City 1, N. Y.



Tumblers [illegible] of a gravity [illegible] Elias Chew Tumbler [illegible] of [illegible] on [illegible] new Straightline unscrambling tumbler to be aligned by the [illegible] action [illegible] single file in an [illegible] The tumbler is a modification of the common [illegible] with a cross piece welded [illegible] the [illegible]

A container [illegible] and [illegible] assembled [illegible] for the tumbling and [illegible] of the [illegible] The company is prepared to supply the [illegible] specified [illegible] and handling [illegible]

All Makers of Items And All Other Products Are Listed In THOMAS' REGISTER — Descriptions . . . Ratings . . . See Page 10

▼ BRIEFIT—Identify by IEN-4000 if you write the maker ▼

DID YOU KNOW THAT . . .

$110.00 buys one of these one-ninth page units of advertising space where a factual description of your products will be seen by . . .

60,338 . . . engineering, operating and production men in all industries . . .

86.1% . . . in plants rated at $100,000 and over and . . .

96.4% . . . of them indicated as most likely to see your advertisement when they check Industrial Equipment News for product news and information and to look for their current requirements.

Good for selling . . . because . . . used for buying

[illegible] address

IEN INDUSTRIAL EQUIPMENT NEWS
THOMAS PUBLISHING COMPANY
461 EIGHTH AVENUE NEW YORK 1, N. Y.

▼ BRIEFIT—Identify by IEN-4001 if you write the maker ▼

BIG NEWS about LITTLE SOCKET SCREWS!

BRISTOL'S MULTIPLE-SPLINE SMALL WIRE-SIZE SOCKET SET AND CAP SCREWS

Never before—convenience of universal wrenching, plus exclusive strength of multiple spline socket shape in sizes as small as No. 1-, 2 and 3 screw!

Only with Bristol's Multiple Spline Socket Screws do you get strength from the socket shape as well as the metal. No expanding pressure . . . no bending or rounding of socket walls.

Set up quickly, stays right, yet is readily loosened by wrench. Ideal for cameras, dental and surgical instruments, etc.

BRISTOL'S SOCKET SCREWS

FREE SAMPLES. Address THE BRISTOL COMPANY
Mill Supply Division, 107 Bristol Road, Waterbury 20, Conn.

▼ BRIEFIT—Identify by IEN-4002 if you write the maker ▼

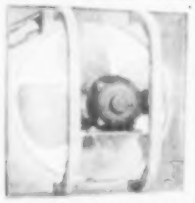
MOST COMPLETE LINE FOR '50!

CHELSEA FANS

—for every industrial and commercial requirement!

Specifying Chelsea Fans for every installation is one sure way to proper ventilation. There's a Chelsea model for every requirement, each type certified as to performance in accordance with the Codes of Propeller Fan Mfrs. Assn.

Chelsea Industrial Type IND



All-Purpose Fan Type BB

Spin-It-Fans, 16 and 22

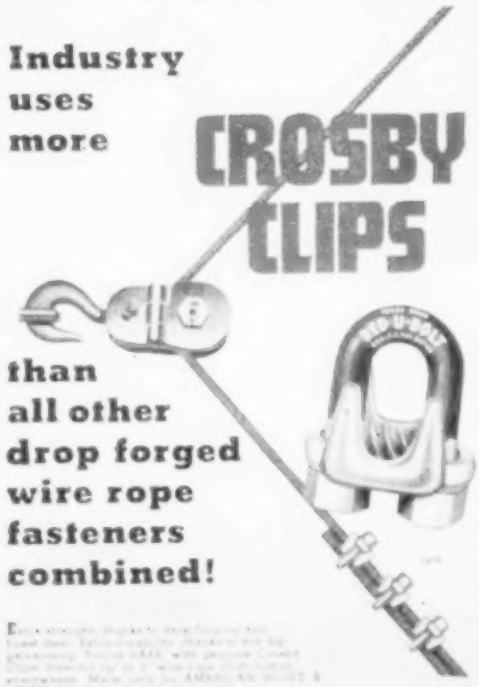
SEND FOR FREE CONTRACTOR'S KIT!

Includes all the information you need to make installing and selling installations in factory, shop, office or home. Selection of proper fan, installation kinds, etc. No obligation—write Department 1.

CHELSEA FAN & BLOWER CO., INC.
1306 GROVE ST., IRVINGTON, N. J.

▼ BRIEFIT—Identify by IEN-4003 if you write the maker ▼

Industry uses more CROSBY CLIPS than all other drop forged wire rope fasteners combined!



[illegible] Crosby Clips are [illegible] Made only by AMERICAN WIRE ROPE & TOOL CO., in East [illegible]

▼ BREEFITT—Identify by IEN-4004 if you write the maker ▼

MORE WELDS -LESS TIME

with Worthington-Ransome Positioners

Your welder gets more arc time out of each working hour when the work is positioned for economical "downhand" welding. He can use heavier electrodes, too, for better welds.

Capacities from 100 lb to 20 tons. Also: Turning Rolls from 3 to 75 tons, stationary and self-propelled.

Write for Bulletin 210C Worthington Pump and Machinery Corporation, Welding and Assembly Positioning Equipment Division, Dunellen, N. J.

WORTHINGTON

WORTHINGTON-RANSOME WELDING POSITIONER

▼ BREEFITT—Identify by IEN-4005 if you write the maker ▼

Enjoy Restful, Secure Seating ☆ ☆ Clarin SEAT

STEEL FOLDING CHAIRS

- Durable Steel Construction —
- Light enough for easy handling —
- Strong enough to support half a ton —
- Unusually quiet in handling and use, due to exclusive mechanism and rubber floor contacts —
- Grip the floor firmly —
- Perfectly balanced against tilting —
- Correct posture design assures complete comfort —
- Guaranteed for 10 years against breakage —

Write
CLARIN MFG. CO. 4449 W. Harrison St., Dept. I-4 CHICAGO 44, ILL.

There are more Clarin steel folding chairs in institutional service than any other make

▼ BREEFITT—Identify by IEN-4006 if you write the maker ▼

Save Valuable Space With the JOY WG-9 "Industrial-Air" COMPRESSOR

The WG-9 features the JOY "Dual Cushion" Valve for top efficiency in continuous heavy-duty service. Vertical design and small floor space savings are floor space. Capacities range from 56 to 822 CFM. The complete JOY line includes compressors from 56 to 7812 CFM capacity in the WGM models available for either centrifugal or air-cooled air supply.

Write for bulletin.

Consult a Joy Engineer

JOY MANUFACTURING CO.
General Offices: Henry W. Oliver Building
Pittsburgh 22, PA.
IN CANADA: JOY-SULLIVAN OF CANADA, LIMITED
GALT, ONTARIO

▼ BREEFITT—Identify by IEN-4007 if you write the maker ▼

CONVEYING . . Portable belt unit, aluminum frame, 10 to 16 in. widths

Source: RAPIDS-STANDARD CO.
342 Rapistan Bldg., Grand Rapids 2, Mich.

Stevedore Jr. is a new device designed for unloading cartons, sacks, etc. from a truck or trailer. It consists of a belt conveyor on an adjustable frame, which is easily moved into the truck or trailer by one man. The belt is driven by a 1/2 hp. motor. Two belt widths are available, 10 and 16 inches.

Length is 15 to 25 ft. in five sections. A foot at the outer end positions the unit on a trailer or loading dock, at a desired angle. The foot allows an quick, accurate placing in a fixed type frame. Conveyor is powered from the large idler through worm drive the wheels is 12 and 20 inches.

▼ BREEFITT—Identify by IEN-4008 if you write the maker ▼

POLISHING . . Portable electric tool, also for sanding, drives 7 in. pad

Source: MALL TOOL CO.
7782 S. Chicago Ave., Chicago 19, Ill.

Model 157 is a new portable electric tool for polishing, sanding, etc. It is equipped with a 1/4 hp. motor, 1/4 in. chuck, 3/4 in. stroke, 3/4 in. backing pad, 1/2 in. sanding pad and 1/2 in. polishing pad. Speed is 3,000 strokes per minute. Tool weighs 4 lb. complete. Adjustable handle is 7 in. long. The sanding pad is 7 in. in diameter, polishing pad 6 in. Tool comes with the backing pad, polishing pad, cuff, chuck, wrench, and instructions.

▼ BREEFITT—Identify by IEN-4009 if you write the maker ▼

GRINDING . . And milling bands for Contour-matic band sawing machine

Source: DuALL CO.
252-56 N. Laurel Ave., Des Plaines, Ill.

Two new bands are 3/8 in. wide, alternate tooth set, grinding and one with carbide teeth for milling. Both are designed for all-purpose use on the Contour-matic band sawing machine (see IEN-10/1/49-49). The grinding band is available with grinding or milling carbide alternate in grits from No. 54 to No. 180. Width is 3/8 inch, length is 100 inch. List price is $34 and $35.50. The milling band is one size 3/8 in. at $30.

For Makers of These And All Other Products Are Listed In THOMAS' REGISTER Descriptions Ratings See Page 56

▼ BREEFITT—Identify by IEN-4010 if you write the maker ▼

UPTEGRAFF

Dry Type Transformers

for Indoor or Outdoor Service

This line includes step power units for installing Uptegraff Dry Type Transformers in most "hard to reach" places. Made with either Class A or Class B insulation as required, and built to standard or special designs. Uptegraff Dry Type Transformers are efficient and dependable.

Write for illustrated bulletin.

R. E. UPTEGRAFF MANUFACTURING CO.
THOMAS STREET . . . . SCOTTDALE, PENNSYLVANIA
Makers of Power · Distribution · Instrument · Specialty Transformers

▼ BREEFITT—Identify by IEN-4011 if you write the maker ▼

Sensational
RESN-X
HEAVY-DUTY FLOORING
IS WORKING WONDERS

where many acids, oils, alkalis, chemical corrosives, solvents, syrups, etc., have caused MAJOR FLOOR BREAKDOWNS.

ROCKTRED Corporation
Manufacturers of a Complete Line of Building Maintenance Materials
629 W. Washington Blvd. · Chicago 6, Illinois · Phone: CEntral 6-8701
In Canada: Rock Tred Corporation (Canada) Limited, Toronto 5

▼ BREEFITT—Identify by IEN-4012 if you write the maker ▼

Quality that saves money . . . that's why *Today it's Roebling!* for Cold Rolled Spring Steel

If you cut down preparation time, you save money? If you cut down machine stoppages and rejects, you save still more? And you'll make all these savings with Roebling Cold Rolled Spring Steel because it's absolutely uniform . . . dimensionally and in physical properties. It is bonded, uncoated, in bright finish . . . uncoated in oxidized black, polished, polished and blued, polished and stained.

If you want Roebling Cold Man help you select the particular specialty wire that will improve both your product and your production, John A. Roebling's Sons Company, Trenton 2, New Jersey.

ROEBLING
A CENTURY OF CONFIDENCE

▼ BREEFITT—Identify by IEN-4013 if you write the maker ▼

What's YOUR Roll Problem?

The Answer is often:

USE

SHAF-TITE* ROLLS

Many Patented Constructions

Choice of

METAL, RUBBER, or WOOD ROLLS

Send For NEW ROLL CATALOG No. 48

INDUSTRIAL ROLL DIVISION
RODNEY HUNT MACHINE CO.
873 Main Street Orange, Mass., U.S.A.
*Reg. U.S. Pat. Off.
RODNEY HUNT

IEN-4014

You can do a lot

with a little **GOLD SEAL TAPE**

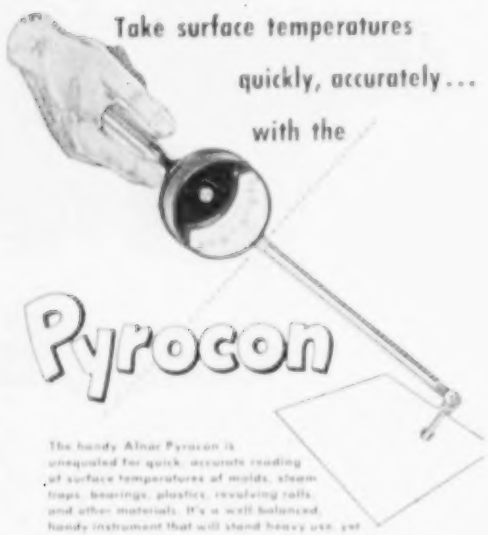
You can talk all you want to — Gold Seal is the best buy in tape. It sticks to the job. Laboratory tested, it production sealed. You'ne back in the business-minded. Get it you further. There's some tape value in every roll because molecules worm. In 10 roll cartons and single rolls — neat and cellophane wrapped by Jenkins Brothers — Jenkins Bros. Rubber Division — 80 Milton St., New York 13, N. Y.

JENKINS Gold Seal Tape
FRICTION ... RUBBER

MADE BY JENKINS BROS. — MAKERS OF FAMOUS JENKINS VALVES

IEN-4015

Take surface temperatures quickly, accurately... with the

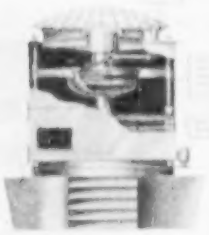


Pyrocon

The handy Alnor Pyrocon is unequaled for quick, accurate reading of surface temperatures of molds, steam traps, bearings, plastics, revolving rolls, and other materials. It's a well balanced, handy instrument that will stand heavy use, yet perform with laboratory precision. A wide selection of thermocouples and extension arms permits adaptation to many types of service. For complete details and prices, send for Bulletin No. 425F. Illinois Testing Laboratories, Inc., Room 517, 420 N. LaSalle Street, Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

IEN-4016



Steam Does Double Duty

The Steam That Is Used For Heating, First Drives Fan in Wing Turbine Heater

Wing Turbine Driven Heaters make steam do "double duty" by utilizing the same steam for both heating and for driving the revolving discharge unit. The turbine, in effect, acting as an efficient reducing valve. Live steam is passed through the turbine, providing power for the heater fan and the exhaust passes to the heavy sections. By using the source of heat first as a source of power for the fan, power costs are cut to a minimum.

The Wing Turbine Driven Heater provides the ultimate in plant heating. Its revolving discharge outlets project a stream of healthy heated air over, around, and under obstructions to all parts of the plant area. Hot and cold spots are eliminated—employees work refreshed and invigorated. Bulletin TH-1 will be sent on request.

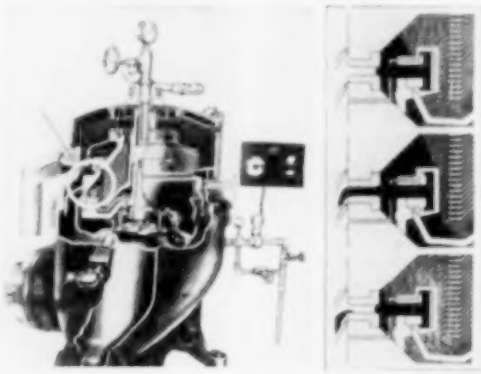
L. J. Wing Mfg. Co.
160 Vreeland Mills Road
Linden, N. J.

Wing
Revolving UNIT HEATERS

IEN-4017

PROCESSING . . Centrifugal machine for fluid clarification or separation.

Source: SHARPLES CORP.
2331 Westmoreland St., Philadelphia 40, Pa.



External control of solids discharge and of solids concentrate features the construction of this new Type DV-2 centrifuge. It is particularly suited for concentrating solids for precise product control. It minimizes loss of the mother liquor with the discharging solids, is adjustable in both frequency and duration of the solids-discharge intervals. The machine develops a centrifugal force of 6,200G. It is available as a clarifier to remove solids from a liquid phase or as a separator for application on two immiscible liquids to separate them and remove the solids.

The rotating bowl incorporates top solids-discharge valves around the inside face. These valves hold in closed position by centrifugal force. They are opened by water pressure or when operating liquid admitted through a separate channel from an outside source. This water, by its pressure, plus by centrifugal force, inside the valve function to overcome the counter effect and retract the valve outward. Frequency of adjustment and function of the internal the water is allowed to remain in the valve are timer controlled outside the machine.

Solids build up within the valves are closed. They open to discharge when the valves are opened. The mother liquid is prevented from going out also by closing them before all of the solids is gone. In normal operation the liquid flows up from the discharge from the top of the bowl. Visual indication of normal operation or need for attention is provided by an overflow sight. Liquid flowing here indicates excessive accumulation of solids. Bulletin 1241, 6 pages, presents illustrated details on the centrifuge and its operation.

IEN-4018

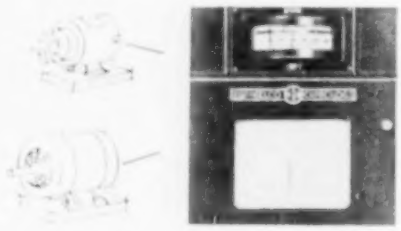
AIR CONDITIONING . . Technical selection data in catalog on railway heating and air-conditioning units

Trane Co.
2517 Cameron Ave., La Crosse, Wis.

Psychrometric charts, performance curves, selection directions and sample calculations are included in new 44-page Bulletin PR-258 on air-conditioning and heating equipment for railroad cars. Accompanying these selection data are catalog descriptions on evaporators, condensers, compressors, heating elements, jet heaters, fans. Diagrammatic drawings show air flow. Schematic diagrams show control arrangements. Other drawings show mounting in dimensions.

All Makers of Three And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page 50

IEN-4019



CURRENT RECORDS!

Wheelco Capacitrol with the "electronic link" provides you with precise AC/DC measurement, indication, or warning whenever critical power conditions occur.

Get selective overload protection, plus permanent current records.

Use Wheelco instrumentals to protect valuable equipment and processes.

Write for Bulletin AC-1.
Wheelco Instruments Company,
345 W. Harrison Street, Chicago, Ill.

wheelco *electronic controls*

IEN-4020

Protects in Tight Spots—

GENERAL ELECTRIC FLEXIBLE STEEL CONDUIT

Here's the all purpose raceway that gives many of the advantages of conduit—yet can be used in cramped quarters where ordinary conduit installations are not practical. Use it, too, in locations where vibration is a problem, for inexpensive temporary wiring, or wherever you need maximum protection and extreme flexibility!

General Electric flexible conduit is installed at costs as ordinary cable. Made from continuous-wound, zinc-coated strip steel, G.E. flexible conduit cuts quickly. There's no threading — no bending — no special fittings to fool with.

General Electric flexible conduit has the same pull-in and pull-out advantages as rigid raceway—and it has future wiring changes economical to make.

For further information on flexible conduit, consult your G.E. Construction Materials distributor or write to Section C1-102, Construction Materials Department, General Electric Company, Bridgeport 2, Connecticut.

GENERAL ELECTRIC

IEN-4021

60 yd. Plibrico Incinerator with protective canopies

SAFE, EASY, CLEAN RUBBISH DISPOSAL...
with a PLIBRICO Incinerator

In incinerators designed and erected by Plibrico, you have the one best way to dispose of your rubbish—safe, free from hazard and smoke nuisance—without messing up your boiler room or reducing boiler efficiency by burning rubbish in your boilers. There are no unsanitary rubbish piles around the plant or boiler room.

The Plibrico Standard Incinerator, shown above, is made in four standard sizes—10, 20, 40 and 60 cu. yds. per eight hours of operation. This incinerator is provided with an air-cooled monolithic refractory lining. Likewise an air-cooled stack to protect the brickwork against thermal shock on cold and wet weather. The Plibrico Standard Incinerator is adaptable to all types of industrial and institutional material—dry rubbish, garbage and wet refuse, pathological material, and special combustibles of all kinds.

For smaller quantities of rubbish, we manufacture the Plibrico Portable Incinerator, a steel-cased unit shipped completely assembled and refractory lined, ready for immediate connection and use—indoors or outdoors. Made in three standard sizes—24", 36" and 48" grate width. May be equipped with auxiliary hot water heating unit to provide free hot water using your rubbish as fuel.

Good housekeeping requires your own incinerator which will more than pay its way by reducing handling cost and eliminating hauling charges. Phone your local Plibrico Sales & Service organization or write for bulletins. Be sure to mention volume and character of refuse to be consumed.

PLIBRICO JOINTLESS FIREBRICK COMPANY
1532 Kingsbury St., Chicago 14, Ill.

IEN-4022

NOW! REDUCE MATERIAL COST
BUT GET PERFECT STAINLESS PROTECTION

with PERMACLAD
STAINLESS CLAD STEEL

PERMACLAD combines the surface characteristics of stainless steel with the forming qualities of carbon steel. It permits you to improve your products, provide corrosion resistance and cut forming costs. You can cold form PERMACLAD with ease—subject it to deeper draws without intermediate annealing—actually form it into products impossible with many other materials.

Hundreds of products from chemical and food processing equipment to automotive bumpers and show cases are being fabricated from PERMACLAD. Write for more information and FREE 8 page technical data folder F-4.

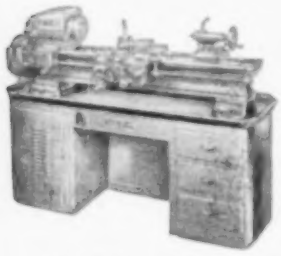
ALAN WOOD STEEL COMPANY
CONSHOHOCKEN, PA.

▼ REPRINT—Identify by IEN-4023 ▼

When is a lathe too big?

A lathe is too big when:

SHELDON



(1) When it is too large and complex for any but the most experienced to operate safely.

(2) When the power cost is excessive for the tool load.

(3) When the tool investment is out of all proportion to the requirements.

(4) When it is too cumbersome and too slow.

(5) When it takes up floor space, heat and light in which output could be multiplied with smaller machine tools.

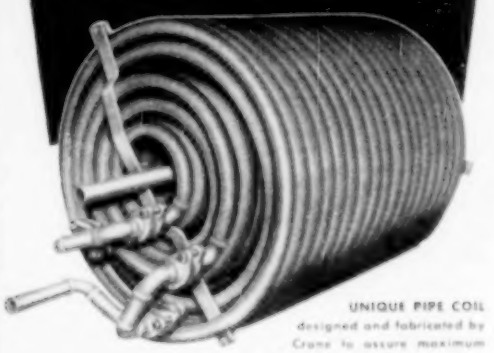
Modern Sheldon Precision Lathes eliminate these excess costs and loadings — leave far more on the profit side. 10", 11" and 12" Swing. "Zero Precision" Tapered Roller Bearings. Increased collet capacity.

Write for catalog.

SHELDON MACHINE CO. Inc.
Manufacturers of Sheldon Precision Lathes • Milling Machines • Shapers
656 N. KNOX AVENUE • CHICAGO 44, ILLINOIS, U.S.A.

▼ REPRINT—Identify by IEN-4024 ▼

FABRICATED TO YOUR PRECISE REQUIREMENTS



UNIQUE PIPE COIL designed and fabricated by Crane to assure maximum dimensional compactness.

...pipe coils by CRANE

No pipe coil design is ever too large or small ... or too complex ... for Crane to handle. Five Crane Shops, strategically located, offer you skilled manpower and experience. Special machinery assures production techniques that make Crane-built pipe coils the finest available.

Crane Shops are skilled in fabricating tubular materials of all varieties. Although carbon steel pipe is most popular, pipe coils are fabricated from wrought iron, copper, brass, nickel, aluminum, 18-8 Mo, and various types of stainless steels. All pipe coils are regularly tested before shipment. Facilities for stress-relieving and heat-treating are available.

SEND FOR PIPE COIL CATALOG 318

This 48-page catalog—full of information for pipe coil specifiers and buyers—includes diagrams of all common pipe coil designs with dimensions; gives valuable engineering data on pipe coil materials and applications.

CRANE CO., 836 S. Michigan Avenue, Chicago 5, Ill.
Branches and Wholesalers Serving All Industrial Areas

EVERYTHING FOR EVERY PIPING SYSTEM

CRANE

VALVES • FITTINGS • PIPE • PLUMBING AND HEATING

▼ REPRINT—Identify by IEN-4026 ▼

GRINDING . . Tool and cutter machine swings 10 in., takes 20 in. on centers

Source: BROWN & SHARPE MFG. CO.
235 Promenade St., Providence 1, R. I.

No. 10N is a cut grinding machine available with universal equipment to sharpen straight and helical gash milling cutters, formed cutters, sheddle and hob teeth, angular cutters of any angle side milling cutters, end mills, straight and tapered reamers, saws. The universal machine will also perform light reciprocal and lateral grinding and surface grinding. It is available in plain assembly, where the sole purpose is to sharpen hobs and cutters.

Features include operating controls at the front and rear, self-type double-end antifriction wheel spindle in factory-lubricated permanently sealed assembly; provision to extend the wheel head to a horizontal plane, mounting of the rolling table on steel rollers with traverse movement of the carriage on rollers also and location of the traverse screw directly above the V ways. Table dogs have spring plungers to minimize operating effort on table reversal.

Bulletin, 24 pages, "No. 10N Cutter and Tool Grinding Machine," presents excellent illustrated detail exposition.

▼ REPRINT—Identify by IEN-4027 ▼

CONTROL . . Diaphragm unit actuates pump engine by line pressure

Source: A. O. SMITH CORP.
5715-19 Smithway St., Los Angeles 22, Calif.

The diaphragm in this tank engine control is connected on the pressure side to the delivery side of a pump, as in a tank truck. The linkage on the spring side of the diaphragm is connected to the engine throttle. The arrangement keeps the throttle in position to idle the engine as long as the outlet from the pump remains closed or shut off.

Opening the outlet, as in opening the delivery valve on the end of the tank truck hose, will lower pressure on the diaphragm and permit the spring to move the throttle toward full-speed position. This drives the pump to make the required delivery. Closing the valve on the hose will again build pressure on the diaphragm and will move the engine throttle back to idling position to shut down the pump.

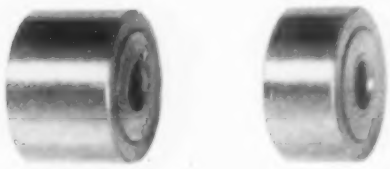
All Makers of Those And All Other Products Are Listed In THOMAS' REGISTER — Descriptions — Ratings — See Page M

▼ REPRINT—Identify by IEN-4028 ▼

A NEWS ADVERTISEMENT BY THE SCHATZ MANUFACTURING CO.

New Double Row Ball Bearing Rollers Replace Precision Bearings

Source: THE SCHATZ MANUFACTURING COMPANY
6750 Fairview Avenue, Poughkeepsie, N. Y.



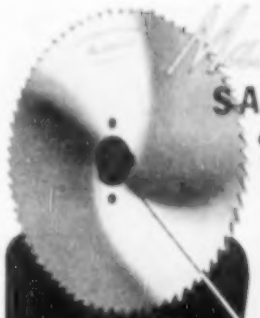
Manufacturers who want to cut costs without sacrificing anti-friction efficiency will be interested in the new type KD and KDS ball bearing rollers made by the Schatz Manufacturing Co.

These bearings are designed to replace expensive precision bearings when extremely heavy loads and high speeds are encountered. They cost is often less than that of bushings or precision bearings—since costly machining and assembly time is eliminated. They can handle loads too heavy for single row bearings in space too small for two separate rows.

All parts are machined from solid bar stock—carbon and alloy steel and imported. Balls are of highly polished, carbon steel. Modifications to the standard line can be made for specific requirements.

Schatz is offering its new Catalog No. 11, which gives complete information on all "Commercial" ball bearings and the Schatz Special Bearing Engineering Service to companies requesting it.

▼ REPRINT—Identify by IEN-4029 ▼



Pay no more, but get extra value! Finest high speed steel. Strong tooth form; teeth, of uniform height, have correct rake angle to speed cutting. Side clearance and flat hub prevent binding; rigid holding. Dual Drive reduces breakage. Extra features, but no extra cost!

Master-Cut SAW BLADES GIVE YOU *Extra Features* AT PRICES NO HIGHER

Why be satisfied with less?

Master-Cut slitting saw blades can be supplied from stock in Dual Drive or conventional key drive type.

Get full details in Bulletin 220-G

THE MOTCH & MERRYWEATHER MACHINERY CO.
DENTON BUILDING • CLEVELAND 13, OHIO

AT YOUR COMMAND • AN UNPARALLELED EXPERIENCE IN CIRCULAR SAWING

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The ANSWER to controlling air electrically!

MODEL NE *Electric* VALVE

10 WATT SOLENOIDS—Low power requirements. No relays, no transformers required. Operates directly off regular 110 or 220 v. circuits. Solenoids continuously rated.

FAST, EFFORTLESS CONTROL—Works by push button, limit switch, or any light contact. Only momentary contact needed. Ideal for remote control . . . interlock or sequence operation . . . building into equipment.

DISC TYPE—Pilot controlled, piston operated. Metal to metal seat, positively air tight. Quiet, self-lapping, long lasting. No packing or seals to maintain.

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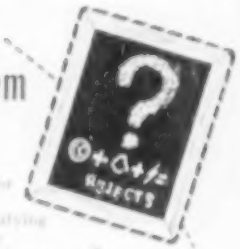
Ask for Bulletin 230

HANNIFIN *Corporation*
1107 So. Kilbourn Avenue • Chicago 24, Illinois
Nationwide Sales and Service

▼ REPRINT—Identify by IEN-4031 ▼

What is your cleaning problem



☐ *Need a Faster Job?*

A. "Quick" is the word for Metso . . . in melting grease and dirt, in emulsifying the oil, in suspending the dirt particles until flushed away.

☐ *Is it Chemically Clean?*

A. Metso offers thorough dirt-removing power so that the surface is grease free. It meets the test "Chemically Clean" for metals to be plated or painted.

☐ *Want to Stop Etching?*

A. Sodatic silica, component of all Metso Cleaners, protects sensitive surfaces yet permits fast alkalinities for rapid cleaning.

A good start to solving your cleaning problems is to request a free sample of Metso with the directions for your individual operations.

PHILADELPHIA QUARTZ CO., 1135 Public Ledger Bldg., Phila. 5, Pa.

try metso cleaners *for your answer*

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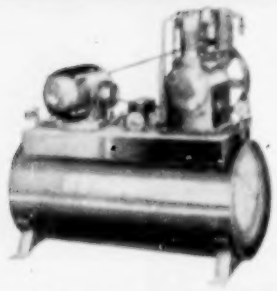
AIR COMPRESSORS



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SCHRAMM small industrial compressors are built in sizes ranging from ½ to 5 h.p., single and two stage sizes. Larger size units available in displacements up to 600 cubic feet. Write for Bulletin GC-48.

SCHRAMM INC. THE COMPRESSOR PEOPLE WEST CHESTER PENNSYLVANIA

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No More Guessing

No More Guessing

P.A. STURTEVANT CO.
ADDISON QUALITY ILLINOIS

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SURE CURE FOR PUMP HEADACHES

TUTHILL PUMPS

Forget pump worries. Tuthill small pumps are recognized the world over for their dependability in lubrication, coolant, hydraulic and liquid transfer service. These universal gear type rotary pumps are available in capacities up to 300 g.p.m. and pressures up to 100 p.s.i. Wide choice of porting and mounting arrangements in both packed and mechanically sealed pumps. Write for General Catalog.

TUTHILL PUMP COMPANY
929 East 95th Street, Chicago 19, Illinois

APRIL 1950

INDEX TO ALL PRODUCTS

How to find what you need:

Leaf through the issue with your current needs in mind, noting those those subjects that appear the solution to your problems as you read the subject headings.

Next use this index to pick up page number references to additional sources on the subjects you have chosen. An asterisk (*) in the index after a number means editorial material.

Now take one subject at a time and refer to the pages you have noted. This time read the editorial descriptions and advertisements in detail. Then write the (IEN) numbers on which you want further information on your Reader Service Form to send to us or write the manufacturer direct.

If you have trouble in finding the answer to your current problem through the subjects in this issue, let us know. We can name sources of supply with the help of our eleven-year index of all products that have appeared in IEN. Any question we cannot answer will be published in our "I Wish I Had" column to invite suggestions.

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Cut Costs with NEW TRI-SPEED Hole-Shooter

See complete kit below

Milwaukee Tri-Speed Kit "412" Includes . . .

1 [illegible]
2 [illegible]
3 [illegible]
4 [illegible]

$79.70

Milwaukee QUALITY TOOLS

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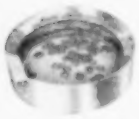
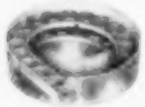
SYNTRON "Vibratory"

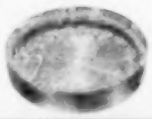
PARTS FEEDERS

Speed up the processing of those "hard-to-handle" parts by automatic machines, assemblers, inspectors, etc.

Vibration moves the parts up and around the spiral track at the desired speed—and selectors orient the parts to their desired discharge position.







Send us samples of your most trouble-some parts—our Engineering Department will be glad to make tests and submit recommendations and quotations—write to—

SYNTRON CO.
410 Lexington Ave. Homer City, Pa.

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NEW BANTAM SIZE AIR VALVES

Save Space . . . Save Maintenance

EVERY ONE of the valves pictured here is a new Schrader design. All know those important advantages over conventional valves:

COMPACT—Designed on minimum lever valve, for example, models as small as less than 1¾" x 1½".

LOW IN MAINTENANCE—Minimum of parts, all easily replaced. Diaphragm washing parts are interchangeable, reducing maintenance inventory.

RUGGED IN DESIGN—Valve bodies are drop-forged brass for longest life.

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Division of Scovill Manufacturing Company, Inc.

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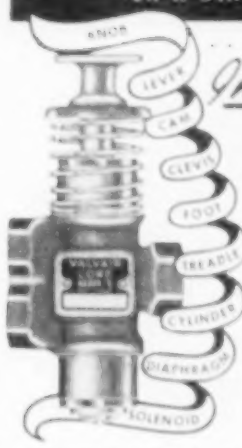
VALVAIR GIVES YOU . . . Any CONTROL ASSEMBLY ON A STANDARD VALVE BODY



. . . because parts are *Interchangeable*

Considered ends on all valve bodies (in respective sizes) are identical, making possible any control assembly. Interchangeable stem, spacer, packer spreader, flange and bearings, and spring are interchangeable. Save on maintenance and stock, save by paying less for valves which embody standardized parts.

• • •

Sizes ¼", ⅜", ½", ¾", 1"

• • •

Ask for Bulletin "A-Q"

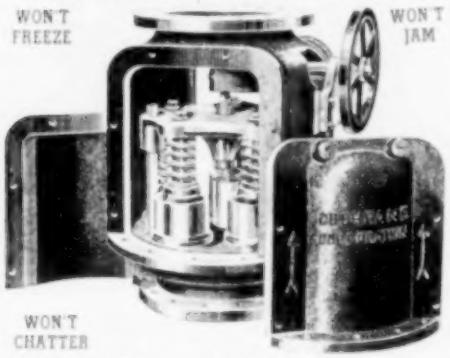
VALVAIR CORPORATION • 454 Morgan Avenue, Akron 11, Ohio
AFFILIATE: SINCLAIR-COLLINS VALVE CO.

Rely Upon Valvair

▼ RAPIDITY—Identify by IEN-4038 if you write the maker ▼

The Relief Valve That Never Fails

LARGER DISCHARGE AREA
• EASILY ADJUSTED •
CONTINUOUS RELIABLE OPERATION



NO LEVERS • NO STUFFING BOXES
NO WEIGHTS

Write for a copy of Publication No. 4150

COCHRANE *Multiport*
BACK PRESSURE RELIEF VALVE

COCHRANE CORPORATION, 3152 N. 17th St., Philadelphia 32, Pa.

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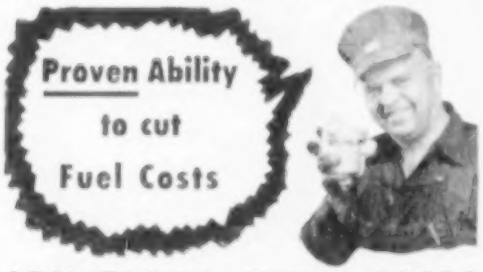

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REPLACING leaky, inefficient steam traps with genuine inverted bucket Armstrongs has proved to be real economy in hundreds of plants now reporting fuel savings from 10% to 33⅓%.

Built for any pressure from 1 to 1500 psi, longer lasting Armstrong Steam Traps save fuel because their heat treated, chrome steel valves won't leak steam. Conserve scarce fuel stocks now by specifying Armstrong.

SEND FOR THE STEAM TRAP BOOK. 36 pages of data on design, construction, selection, installation and maintenance of Armstrong traps for all pressures, all services.

ARMSTRONG MACHINE WORKS
888 Maple St., Three Rivers, Michigan

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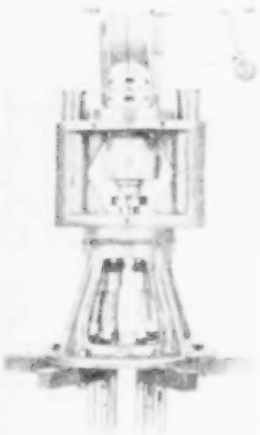


NEW TAP or DRILL UNIT by THRIFTMASTER

Features

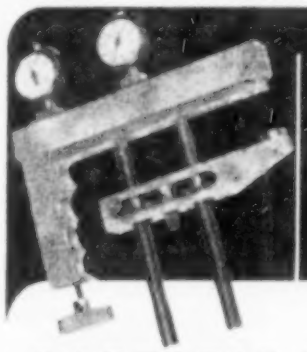
1. Attaches to Any Drill Press
2. Automatic Reverse for Tapping
3. Built on Same Set-Up
4. Spindle Adjustable to Various Heights of Patterns
5. Increase Drilling and Tapping Production 2 to 1 Over Portable Equipment . . . Lower Cost
6. Light or Heavy Duty Up to 3" Diameter Up to 30 Spindles

ALSO
COMPLETE LINE
ADJUSTABLE AND FIXED CENTER
DRILL HEADS

Subsidiary of Thomson Industries, Inc.

THRIFTMASTER PRODUCTS CORPORATION
1040 N. Plum St., Lancaster, Pa.
also makers of
DORMAN AUTOMATIC REVERSE TAPPERS
4 Sizes • Friction & Positive Drives • Capacity: ¼" Dia to 2" in Steel

▼ RAPIDITY—Identify by IEN-4040 if you write the maker ▼



BENCH TYPE ACCURACY AT LESS THAN HALF THE COST OF BENCH TYPE TESTERS!

PORTABLE HARDNESS TESTER

FOR DIRECT DIAL ROCKWELL READINGS

This new Riehle Portable Hardness Tester is ideal for testing bar stock, sheet stock, tubing, crankshafts, cylinder blocks, gears, assemblies, and other hard-to-get-at pieces. Tests both inside and outside surfaces. 5" diameter range. No set-up time. Furnished in compact carrying case, complete with three test blocks, flat anvil, "V" anvil, convex anvil, diamond and ball indentors. Weight only 5 lbs. 7 oz.

WRITE TODAY FOR ILLUSTRATED BULLETIN AND PRICES

RIEHLE TESTING MACHINES
Division of AMERICAN MACHINE AND METALS, INC.
East Moline, Illinois
ONE TEST IS WORTH A THOUSAND EXPERT OPINIONS

▼ RAPIDITY—Identify by IEN-4043 if you write the maker ▼

FOR FAST REPAIRS to RUTS & HOLES use STONHARD STONFAST

Patch ruts and holes in your driveways, traffic aisles and floors with STONHARD STONFAST. No tie-up of traffic, no delay in plant operation—STONHARD STONFAST is instantly ready to withstand trucking and traffic. Simple . . . easy to use . . . just remove from container and tamp into hole or rut.

STONHARD COMPANY
Roofing Maintenance Materials Since 1902
Stonhard Building, 1206 Spring Garden Street
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Send for FREE Folder

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MAKING A CLEAN SWEEP

FEWER punctures — that's what this STEARNS Road Sweeping Magnet means to Kentucky motorists. On the job every day, this magnet picked up 25 lbs. of puncture producing material — the equivalent of 2500 possible punctures — on a recent six-mile run.

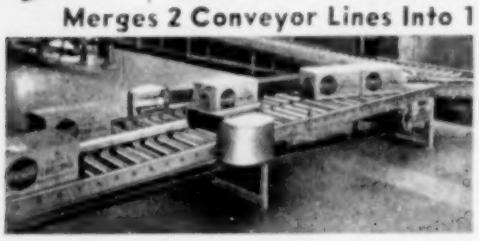
Magnets like these are only part of our extensive line of magnetic separators, pulleys, drums, suspended and lifting magnets that STEARNS Magnetic offers for protection, reclamation, purification, concentration and separation purposes.

Consult STEARNS — more than two generations of magnetic engineering experience at your disposal.

Stearns MAGNETIC MANUFACTURING CO.
626 S. 28TH ST., MILWAUKEE 15, WIS.

▼ BREFITT—Identify by IEN-4045 if you write the maker ▼

NEW A-F Automatic MERGA-FLOW
Merges 2 Conveyor Lines Into 1



PREVENTS TRAFFIC JAMS!

A-F MergA-Flow provides a simplified, *automatic* way to control the flow of cartons, cases and packages at conveyor intersections—prevents jamming and costly conveyor line stoppages.

The A-F MergA-Flow will also *shorten* feed lines in your *plant* — keep main lines flowing at capacity. Write for full information—today!

THE ALVEY-FERGUSON COMPANY.
142 Disney Street — Established 1901 — Cincinnati 9, Ohio
Offices or Representatives in Principal Cities—Coast to Coast

CONVEYING EQUIPMENT
Alvey-Ferguson
WASHING MACHINES FOR INDUSTRY

▼ BREFITT—Identify by IEN-4046 if you write the maker ▼

BIG Drilling Jobs

Demand the BEST Drills!

Typical Black & Decker *quality* features make B&D Drills your best buy when you're drilling large holes! They'll save you time and money with such features as *extra power* from a B&D-built motor that won't stall no matter how hard you bear down—*husky parts* for top performance on the toughest jobs—*complete control and balance* for easy operation through a choice of handles—*sturdy housings* to stand up under rough use. See your nearby B&D Distributor for the complete line of B&D Heavy-Duty Drills, ¼" to 3½". Write for free catalog to: The Black & Decker Mfg. Co., 615 Pennsylvania Ave., Towson 4, Md.

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Black & Decker
PORTABLE ELECTRIC TOOLS

"I WISH I HAD"

This column concentrates upon reader requests for information on sources of supply for products or services or technical advice which we ourselves cannot supply, advises you of new patent-protected products for your possible manufacture, and available surplus of specialized products.

It is published to invite your suggestions and comments, which are forwarded immediately to the originator, just as we will be happy to publish similar problems for you.

ACCOUNTING . . . "I wish we had a lease for two National Cash Register accounting machines No. 32221 (14C 32-F) D1-C20 and No. 30021 (D1-2X, 16-Ds, 4RE-B1). They were purchased in 1949, are in New Haven, Conn." IEN W-56

ENGINEER . . . "I wish I had contact with an organization needing the full time services of a experienced professional engineer and engineer at law with experience in research, design and production. I am at present in Philadelphia." IEN W-57

ENGINEER . . . "I wish I had contact with a company in need of a man to act as field engineer on pneumatic or mechanical equipment in New England." IEN W-58

ENGINEER . . . "I wish I had contact with a company requiring a production engineer for work in estimating government contracts, tool design, production methods, product design and mechanical layout on the basis of my 18 years of experience. I am 40 years old and am employed at present in New Jersey." IEN W-59

FASTENINGS . . . "I wish we had a buyer for several hundred thousand surplus screws and nuts ranging in size from 2-64 to 10-32. Silver and round head design. The stock is in Toledo. Lists will be mailed on request." IEN W-60

LEATHER BELTING . . . "I wish we had a buyer for a quantity of used leather belting, single and triple-ply, in widths from 3 to 24 inches. The lot includes one two-ply 24 in. belt, 75 ft. in length. A complete list is available on request. The belting is in Cedar Rapids, Iowa." IEN W-61

LUMBER . . . "I wish we had a source of supply for 1 by 4 and 1 by 6 mill and to 20 ft. in length to be made up of first and second finished free sides to white or yellow pine, Douglas Fir, poplar or ¼ in. plywood wood on two sides. We are located in Dallas, Texas." IEN W-62

NEW PRODUCT . . . "I wish we had contact with an organization or an individual with a product that we could take over for manufacture in our small New Jersey plant and for sale through our organization, selling principally on the major chain stores and electrical supply and general merchandise trade." IEN W-63

NEW PRODUCT . . . "I wish we had one or more non-competitive products for production and sale in our Chicago manufacturing organization. We have tool and die facilities for sheet metal work to handle complete die formed pieces to 18 by 30 in. with a depth of draw to six inches. We have production facilities for all types of metal fabrication, bonderizing, finishing and assembling." IEN W-64

NEW PRODUCT . . . "I wish we had contact with a manufacturer to purchase our patent rights or to make and sell our dual combination and key lock, which is suitable for either car or house doors employing number locks. The patent was granted in September of 1949." IEN W-65

NEW PRODUCT . . . "I wish I had a buyer for my patent No. 2,502,002 on a closure for collapsible tubes in which the spring-load cap threads on the end of the closure, but is turned only part way off to dispense contents." IEN W-66

PAINTING . . . "I wish we had a buyer for a conveyor type water wash DeVilbiss spray booth, measuring 14 ft. 9 in. by 7 feet. The equipment includes three 30 gal. pressure tanks with air agitators and inserts, fluorescent illumination, pumps, exhaust fans, outlets and explosion proof 5 and 10 hp. motors. Present location is in Long Island, New York." IEN W-67

TESTING . . . "I wish we had contact with someone prepared to rail or a small unit Tabor Abrader." IEN W-68

MILLING . . . "I wish we had a buyer for a Reid Prentice No. 2 T.R.C. universal head vertical milling machine complete with a 5 hp., 3 phase, 220-volt, 60-cycle motor. The machine includes a DC feed motor and an electronic control with attachments. The table measures 22 by 32 inches. The machine has been used 200 hours, is at present in Long Island, New York." IEN W-69

▼ BREFITT—Identify by IEN-4047 if you write the maker ▼

LYON-Raymond
HYDRAULIC
Pallet Lift Trucks

Furnished in Several Models to Fit Your Needs

1. Streamlined Lightweight Models For fast handling and maneuvering the light or pallet loads.
2. Heavy Duty Models For pallet loads up to 4,000 lbs. — Also 6,000 lb. capacities.
3. Electric Tiering Models New — Different — The Shortest — The Lightest — The Most Maneuverable of any powered Pallet Tiering Truck.

Write for literature on the models in which you are interested.

LYON-Raymond CORPORATION
Electric Power Trucks — Skid and Pallet Lifts
Hydraulic Elevating Equipment
Positioning — Sheet and Die Handling
3527 Madison St. GREENE, N.Y.

▼ BREFITT—Identify by IEN-4048 if you write the maker ▼

NOW — continuous direct reading of DEW POINT

● Direct, continuous records of dew point temperature are now made possible for the first time by the unique new Foxboro Dew Point Recorder. Employing the exclusive new Dewcel bulb, it is especially suitable for moisture measurement in control of autoclave, dryers, dehydrators, air conditioning and similar equipment. Instrument can be remotely located from the bulb.

This system requires no refrigeration . . . no movement of air . . . no water connections. Neither adds nor removes water from atmosphere. It gives direct recordings of dew point from −50°F. to +140°F. at working temperature from −50°F. to +220°F. or above, when sample is cooled. Readings easily converted to absolute or relative humidity when desired.

For further details write The Foxboro Company, 134 Neponset Avenue, Foxboro, Mass. U. S. A.

FOXBORO HUMIDITY INSTRUMENTS

▼ BREFITT—Identify by IEN-4049 if you write the maker ▼

STEEL STRAPPING speeds shipping to keep up with faster production flow

The Plasticrete Corp., Hamden, Conn., worked out a faster production system on cooler blocks. Problem: how to package these "cubes" of 90 or more blocks for shipping at this speeded up production rate. Solution: tying the blocks together into one compact unit with Stanley Steel Strapping. Just another packaging, shipping accomplishment for the Stanley Steel Strapping System. Write for information on the complete line . . . reels, tools and accessories. The Stanley Works, Steel Strapping Division, 143 Lake St., New Britain, Conn.

STEEL STRAPPING AND CAR BANDING SYSTEMS

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Reg. U.S. Pat. Off.
HARDWARE • TOOLS
ELECTRIC TOOLS • STEEL STRAPPING • STEEL

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FLOORS LAID TODAY • READY FOR USE IN 24 HOURS

Install "PERMAFLEX" HARD MASTIC any thickness required over Old Rough Concrete or Wood Floors, Aisles, Platforms, Walks or Drives, INTERIOR OR EXTERIOR. Edges are spliced to a feather edge.

2000 LBS. PRESSURE PER SQ. IN. WILL NOT RUT.

No Dust • No Chipping • No Delays to Production

WE CONTRACT FOR COMPLETE INSTALLATIONS ANYWHERE EAST OF MISSISSIPPI RIVER

Prices Are Amazingly Low
Estimates Furnished Without Obligation
PERMAFLEX FLOORS

PERMAFLEX FLOORS ARE
• Heavy Duty • Stainproof • Fire Resistant • Warm & Quiet
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Your men install for 15c PER SQ. FT. for all labor and material

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